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Navy New Recruit Survey (NRS)

David W. Robertson

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Navy New Recruit Survey (NRS)

David W. Robertson

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13. ABSTRACT (Maximum 200 words) A survey was designed to assess effectiveness of recruiting incentives, advertising, and applicant processing. Items were developed for eight content areas—reasons for joining, influences from family and friends, parent background, ads awareness, ads influence, recruiter contact, special enlistment incentives, and job interests. The survey was administered in 1990-1991 to about 4,000 men and 1,000 women recruits. Top reasons to join the Navy were for high-tech training, preparation for a civilian job, travel, serve country, and fringe benefits. Of various Navy media ads, the highest impact was from brochures, followed by television and mail. The recruiter's help in providing details about Navy opportunities doubles the applicant's interest, highlighting the critical importance of effective recruiters. Most recruits (84%) first thought about joining the Navy before the 12th grade, including 31% while in the 9th grade or earlier. The long-term job interests of men and women reflected continuing patterns of so-called "traditional" type jobs of each. For the Navy to compete effectively for high quality people, sites to administer the Armed Services Vocational Aptitude Battery (ASVAB) should be maximized. That is because high-quality applicants are strongly influenced when recruiters tell them what opportunities and specific programs are available from their ASVAB scores. The results provide useful information for allocating recruiting resources and developing sales strategies.					
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Foreword

This project was funded by Program Element 0604703N, Work Unit 0604703N.R1822.MH003. Sponsors were Chief of Naval Personnel (PERS-23) and Chief of Naval Education and Training. Objectives were to: (1) assess effectiveness of recruiting incentives, advertising, and applicant processing; and (2) provide input data for trade-off analysis of resource allocations.

This report documents: (1) design of the New Recruit Survey (NRS) booklet, and (2) the briefing displays that were used to report results to staffs of the Bureau of Naval Personnel and the Navy Recruiting Command in December 1991. Publication of this report was delayed when funding in support of recruiting functions was reduced. Funding for this particular project was terminated and redirected at the end of the second year of a planned 5-year effort. The format of the report is designed primarily for the busy manager. Thus, the relatively brief text "speaks to the charts" in Appendix A. In addition to the briefings, 171 pages of statistical analyses, on particular NRS items and subgroups of interest to management, were delivered to those staffs.

DELBERT M. NEBEKER
Director, Organizational Systems Department

Summary

Problem

In this era of downsizing, a smaller force will require higher quality people to operate and maintain highly sophisticated weapon systems. Competition among military services, civilian employers, and educational institutions, for available quality people, will be intense. Recruiting and advertising resources are very costly. To be cost effective, Navy recruiters need data that identifies the relative strength of motivators, both positive and negative, that influence the individual's enlistment decision.

Objective

Design and administer a survey to recently arrived recruits (New Recruit Survey [NRS]) that assesses effectiveness of recruiting incentives, advertising, and applicant processing; and provide input data for trade-off analysis of resource allocation.

Approach

Items were developed for eight content areas—reasons for joining, influencers, parent background, ads awareness, ads influence, recruiter contact, special enlistment incentives, and job interests. The survey booklets were printed for electronic (optical mark) scanning, to expedite data processing, so that preliminary results could be provided in 30 days after each administration. The survey was administered to about 4,000 men and 1,000 women recruits at Recruit Training Centers during three periods—summer 1990, winter 1990-1991, and summer 1991. For the summer 1991 booklet, some items were added on influences of the Gulf War. Because recruiting resources are used primarily to target men for regular Navy programs, many analyses assessed motivations and influencers particularly for that subgroup.

Results

The top reasons to join the Navy were for: high-tech training, preparation for a civilian job, travel, serve country, benefits for self and present/future dependents, and interesting job. Older recruits were more interested in benefits for dependents and job security, and less interested in travel, than were younger recruits. But recruits indicated many other important reasons that they joined—more than 60% of them identified 12 of 26 reasons (including the above “top” ones) as having much or very much influence on their decision. As to influence of family and friends, the most *encouraging* influencers were parents, and friends or relatives in the Navy; and most *discouraging*, were female and male friends.

Of Navy's various ads, highest impact was from brochures, followed by TV and mail. Movies and TV shows (fiction such as “Top Gun” and docudramas) had a strong influence on 24% of recruits. Calls and visits by the recruiter had substantially greater impact than did any of the media ads, highlighting the critical importance of effective recruiters. (Consider, however, that the media ads are essential to *initiate* an applicant's interest.)

Subgroups by mental category (by Hi/Mid/LoCat) were compared regarding how much influence each opportunity/reason had (by identifying reasons that more than 60% of the subgroup

indicated "very much" or "much" influence). The LoCats marked more reasons having much influence ($n = 18$ reasons) than HiCats ($n = 11$ reasons). This result suggests that the LoCats are more influenced by a greater variety of ad/recruiter information, or have greater variety of interests for joining the Navy, than do the HiCats. One important exception, however, the most powerful impact for HiCats was when they were told what opportunities were available from their Armed Services Vocational Aptitude Battery (ASVAB) scores.

Comparing men's and woman's job interests, the top two reasons that men joined were for high-tech training and preparation for a civilian job; and for women, job security and travel. As to eventual civilian job interests, men's were: engineering/research, electromechanical repair, mechanical repair, and safety/police. Women's were: nurse/therapist, teacher/accountant, electronic surveillance, and office/clerical. These results reflect the continuing job interest patterns of the so-called "traditional" type jobs of men and women respectively.

Changes in encouragement, as a result of the Gulf War, were generally positive. However, discouraging influences increased from the mother, spouse, and friends. As to when the recruit first thought about joining the Navy, most (84%) recruits thought about it before 12th grade, including 31% while in 9th grade.

Conclusions and Recommendations

1. Because most recruits identified many reasons/opportunities that strongly influenced their decision to join the Navy, recruiting ads need to highlight a great variety of opportunities.

2. After media ads, movies and TV shows, and family and friends have initiated some interest in the individual to consider joining the Navy, effective recruiter interaction with that individual is of critical importance. The recruiter's help in providing details about Navy opportunities—more than doubles the applicant's interest.

3. For the Navy to compete effectively for high quality people, sites to administer the ASVAB should be maximized. That is because high-quality applicants are strongly influenced when recruiters tell them what opportunities and specific programs are available from their ASVAB scores.

4. The percentage of women interested in electromechanical jobs (so-called "nontraditional" jobs for women) is relatively small, and may account in part for failure to achieve quotas for women to enter these jobs. Nonetheless, 3 to 7% of women did express interest in these jobs. For recruiting strategy, these results suggest that it may be more effective to go to technical/vocational schools where women have already shown interest in these jobs, rather than try to "sell" these jobs to women applicants at the recruiting station (walk-ins).

5. The ways in which highly effective recruiters stimulate applicant interest, as documented in these results, should be incorporated in curricula of the Navy Recruiting Orientation Unit (NORU) courses.

6. Generally, these results provide important information with which to guide management in decisions regarding relative allocation of resources for recruiting ads and incentives, and for recruiter sales strategies.

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Introduction

Problem

Market data are needed to support advertising of enlisted incentives and allocation of recruiting resources. Recruiting and advertising resources are very costly, and competition for available quality people in the labor pool is intense. Particularly, as downsizing is being carried out in both military and civilian organizations, civilian employers and educational institutions are also vigorously recruiting for quality people in the same target market as are the military services.

To be cost effective, Navy recruiting advertising needs to identify and emphasize the operative job incentives—in ways that maximize positive attraction and minimize negative attraction. Better information is needed to identify those incentives, and particularly, to assess the *relative* attraction of each incentive for different subgroups (by abilities, job interests, etc.) within the target market.

Present advertising is directed towards the total market (the “unsold” market), although less than 4% actually enlist (the “sold” market) in the Navy. Nonetheless, survey access to the sold market is much easier than to the unsold market, and important knowledge can be gained about positive and negative motivators that influenced the *actual* enlistment decision.

Objective

Design and administer a survey that: (1) assesses effectiveness of recruiting incentives, advertising, and applicant processing; and (2) provides input data for trade-off analysis of resource allocation (see C1 in Appendix A).

Note: Citations of briefing charts, C#, refer to chart (C) numbers in Appendix A. Numbers at base of bar graph charts in Appendix A refer to question (Q#) numbers in the survey, Appendix B.

Approach

Previous Surveys

Recent similar-type surveys to Army, Air Force, and Navy recruits were reviewed. The Department of Defense (DoD) surveys to the unsold market—Youth Attitude Tracking Study (YATS)—were also reviewed. The particular types of scales used in the various surveys were assessed for their relevance to project objectives. For example, one of the sections of the Navy 1987 and 1989 surveys presented a list of 22 “benefits” (that one would get from the Navy) on a 5-point Agree/Disagree scale. The results, however, were not reported as “benefits,” but as “life goals” (see C2 and C3). There is no research evidence that a teenager contemplates long-term (“life”) goals in the enlistment decision process. For many applicants, the “dominant buying motive” may be quite singular and short-term (as suggested in C3).

Design of 1990-1991 Survey

Items were developed for eight content areas: reasons for joining, influencers, parent background, ads awareness, ads influence, recruiter contact, special enlistment incentives, and job

interests (C4). Continuous type response scales were designed for all reasons/influence/helpfulness type items, so that each item could be measured independently (in contrast to "forced choice" type designs, such as "pick top five," "mark highest influence," etc.). All of these scales presented a common orientation to the respondent—"how much" (influence, help, interest, etc.).

The respondent provided a social security number so that background information could be extracted from personnel files, thereby reducing survey administration time and increasing reliability of background-type items. The survey booklets were printed for electronic (optical mark) scanning to expedite data processing, so that preliminary results could be provided in 30 days (C4).

The survey was designed to comprise some "core" items that would remain constant over subsequent administrations (to track trends), and some "current" items that would be responsive to special programs or immediate concerns. The winter 1990-1991 booklet is in Appendix B. For the summer 1991 booklet, items on special programs (Q13-15, 94-141 in the previous survey, Appendix B) were deleted, and new items were added. New "current" items (renumbered as indicated) included: School grade when first thought about joining the Navy (Q48), influence of the Gulf War (Q94-101), the separate influence of each parent (Q29, 30) and of teachers and counselors (Q36, 37), awareness of years active duty (ACDU) signed up for (Q102), and school/work status at time of enlistment (Q141). Responses for these new items, from the summer 1991 sample, are shown in Charts C38-C41.

To document recruits' Navy and civilian job interests (in Q143, 145), simple job taxonomies were developed (see Appendix C for civilian jobs; the Navy Rating taxonomy for Q143 is not part of this analysis). The civilian job taxonomy displayed 19 job types across 7 job areas, and provided examples for each job type (for Q146). (This information will be used for future analyses to correlate civilian job interests with career intent and retention.)

Sample

The survey was administered to men and women recruits at Recruit Training Centers at three periods (C5)—July-August 1990 (summer 1990 sample), November 1990-January 1991 (winter 1990-1991), and July-August 1991 (summer 1991)—a total of 4,920 recruits. Initially, the survey was administered on recruits' arrival day (first half of summer 1990 sample), but because of conflicts with other activities on arrival day, administration was shifted to recruits in their third week of training. Only the responses from recruits who subsequently graduated were used in the present analysis. (The attrite sample is part of a separate analysis.)

There are several hundred Navy enlistment programs available for an applicant to consider. The programs involve a mix of years obligation (YO), type school for occupational specialty, type duty (air, surface, sub, etc.), and regular or reserve service. To group these several hundred programs, 12 groups were created (C6). Groups included: 5 and 6YO programs, 4YO sub and technical school, 4YO general detail ([GENDET]—no school guarantee), Navy College Fund, and five Reserve programs (of various ACDU obligations of 2/3/4 YO—groups 2TR and 4TR with a technical school, 3AM and SAM active mariner, and 2GN without a school. The five Reserve programs comprised 17% of the total sample.

Demographic distributions are presented for racial/ethnic mix (C7), age, and mental category (C8). Most of the recruits who enter ACDU in the summer have just graduated from high

school, and are younger than wintertime accessions (C9). For example, the summer 1990 sample includes 60% age 17-18 recruits, compared with 32% in the winter 1990-1991 sample.

Analysis

Response distributions were calculated for the total group and for subgroups of particular interest. For example, because recruiting advertising is designed primarily to promote regular Navy programs in the male target market, the primary subgroup of interest comprised men in regular programs (C10, $n = 2,060$). Within this group, subgroups were compared by age (17-18, 19-20, 21-34), mental category (I-II [HiCat], IIIU [MidCat], IIIL-IV [LoCat]), and years ACDU obligation (2YO, 4YO school, 4YO nonschool—GENDET). Other subgroups were formed from the total sample to compare men and women, and seasonal trends on selected items (C10).

To compare "how much influence" (or "help", or "encouragement," etc.) among a set of items, bar charts were constructed that displayed the sum of percentages from the *top two columns* (second type measure in C11)—*a* (very much) + *b* (much) for a 5-point scale (in which percentages across all five points sum to 100). The sum of the *top three* columns were displayed for a 7-point scale (or *bottom three* for discouraging influences). (Management had indicated a preference for these kinds of graphic displays, over "weighted means.") After responses to these multipoint scales were aggregated into two alternatives, confidence intervals were calculated for sample sizes similar to the subgroups that were analyzed. (see Appendix D.)

For "single most" influence in Q28, regarding the 26 reasons in Q03-Q27, percentages were calculated across all 26 items (summing to 100—first type measure in C11). For Ad awareness items, Q51-Q60, however, each cell of each ad source of each service (examples—51a, 55b, etc.) can sum to 100%. Chart C12 shows an example to calculate a "weighted mean." These means can be ranked (third type in C11) and then compared with the ranks of "single most" (first type) or "how much" (second type) measures (C11). (Weighted means were included in the 171 pages of additional statistical analyses delivered to management, but for brevity, are not displayed in this report. Ranks by "how much" and "weighted mean" were fairly similar.)

Results

Men in Regular Navy Programs

The following charts show the relative strength of opportunities/reasons to join the Navy, and the relative awareness and impact of family/friends influences, recruiting ads, demonstration teams (such as the Blue Angels), "open house" activities, and recruiters (C13).

Opportunities and Influencers

By the "single most" (Q28) measure, the top five reasons accounted for nearly half (47%) of the total 26 reasons (C14)—High-tech training (Q05), Preparation for a civilian job (Q17), Travel and see the world (Q21), Serve my country (Q25), and Provide benefits for present/future dependents (Q19). By the "how much" ($a + b$) measure (C15), two of the top five reasons were different (from C14)—Pay and benefits for self (Q18) and Work in job of interest to me (Q07). Also, by the 5-point scale (in which the responses to each item/reason sum to 100%, thus independent of other items),

more than 60% of the recruits (in C15, 62 to 82%) marked 12 of the 26 reasons as having "Very much" or "Much" (a + b) influence on their decision to join the Navy.

As to the influence of family and friends (C16), the most *encouraging* influencers (a + b + c of the 7-point scale) were parents (Q31), friends or relatives in the Navy (Q34), and other family or relatives (Q33). The most *discouraging* influencers (e + f + g) were female friends (Q38), male friends (Q35), and spouses (Q32), (although few recruits are married at the time that they enter ACDU). The discouraging influencers, however, were substantially less than the encouraging ones.

Ad Awareness and Impact

Navy recruits saw or heard (were "aware of") more Army recruiting ads than Navy ones, for four media—radio, television (TV), newspaper, and magazine (C17), reflecting the greater funding to Army than the other services, especially for TV ads. For other media (mail, billboard, brochure, poster), however, the Navy ads were seen more than those of the other services, by Navy recruits (C18). (Note: Navy recruits may have marked their awareness of Navy ads so highly, because they were already considering joining the Navy rather than other services. Recruits in other services may mark the ads of their selected service similarly higher than ads of other services.)

By comparison, the *impact* (C19) of Navy's various ads was similar to recruits' awareness—brochure was highest, followed by TV and mail.

Navy Demonstrations and Recruiter Impact

Although not a Navy activity, movies and TV shows (fiction such as "Top Gun" and docudramas) had a strong influence on 24% of the recruits (C20, Q76). The percentage influence for Navy activities, demonstration teams and exhibits (Q72-82), are smaller. However, if the influence is calculated only on the responses of recruits who had *attended* those activities, the percentages are increased—from 12 to 26% for Blue Angels (Q77), from 3 to 8% for Balloon Team (Q78), 16 to 28% for "open house" (Q82), and so forth.

The critical importance of effective recruiters is indicated in C21. Recruiter calls (Q74) and visits (Q75) had substantially greater influence than did any of the media influences. Further, the recruiter's help in providing details about Navy opportunities, more than doubled the applicant's interest (Q85, 86)—from 29 to 73%. (Consider however, that the media ads are essential to *initiate* an applicant's interest.)

Subgroup Comparisons

The following charts show differences (or similarities) among subgroups of particular interest (C22,31)—five comparisons by: Enlistment program, age, mental group, gender, and season. The first three of the comparisons used the latter half of the summer 1990 and all of the winter 1990-1991 samples. (The sample from early summer 1990, arrival-day recruits, was excluded because of lower reliability. The summer 1991 sample was not used, because master personnel file data were not yet available for subgrouping when these analyses were performed.

By Enlistment Program—Career Intent

Most of the winter 1990-1991 sample recruits who entered via the 2 or 4YO GENDET, or 4YO school program, were in the low mental categories—CAT3L and 4 (C23). The 4-year obligors with a school guarantee (4YO Scl) were more evenly distributed across the mental groups than were the other two programs. Most of each group expected to remain on ACDU (Career intent, Q148) beyond their initial obligation (C23). On this career intent question, the sum of responses to Very high + High + Fair indicate that about 53% of 2YOs, 85% of 4YO GENDET, and 67% of 4YO Scl expect to remain beyond their initial obligation. (The 2YO was a new Naval Reserve program, just introduced in the fall of 1990, in which members return to the inactive reserves after their active 2YO. Thus, few would expect to remain on ACDU beyond their 2YO.)

By Age—Reasons, Influence, and Impact

Comparing three age groups (17-18, 19-20, 21-34), there were few differences (C24, 25), although the high age group was more interested in benefits for dependents (Q19) and job security (Q03), and less interested in travel (Q21), than were the younger groups. Female friends provided more discouragement for joining the Navy, to the youngest group than to the older groups. There were few differences on ad and demo impact (C25).

By Mental Group—Reasons, Ad/Recruiter/Armed Services Vocational Aptitude Battery (ASVAB) Impact

Among three mental groups (Hi/Mid/LoCat) by the "single most" scale, all three groups marked "High-tech training" (Q05) and/or "Preparation for a civilian job" (Q17) as top reasons (C26). The MidCats marked "Benefits for dependents" (Q19), and LoCats marked "Travel" (Q21) as top reasons also.

During the analyses (of top reasons by aggregation of the continuous-type scale—Very much or Much influence, a + b), it was also observed that the *number* of the 24 reasons (Q03-26) for which the groups marked (a + b) greater than 60% were fewest by the HiCats ($n = 11$ of the 24 reasons, MidCats $n = 14$), and highest by the LoCats ($n = 18$). This result suggests that the LoCats are more influenced by a greater variety of ad/recruiter information, or have a greater variety of interests/reasons to join the Navy. A similar result was observed from ad impact of the Navy (C27) and DoD (C28) ads—overall impact greatest for LoCats, and lowest for HiCats

The one exception, however, is being told what opportunities are available from ASVAB scores (C29, Q83). This impact was not only highest for HiCats, but higher than the impact of any other medium to any other mental group. This result points up the importance of maximizing opportunities to administer the ASVAB to potential HiCat prospects. These results are summarized in C30.

By Gender—Reasons, Civilian Job Interests

The top two reasons that men joined (C32) were for "High-tech training" (Q05) and "Preparation for a civilian job" (Q17); and for women, "Job security" (Q03) and "Travel and see the world" (Q21). As to eventual civilian job interests (C33), men's were engineering/research,

electromechanical repair, mechanical repair, and safety/police. Women's were nurse/therapist, teacher/accountant, electronic surveillance, and office/clerical.

These results reflect the continuing job interest patterns of the so-called "traditional" type jobs of men and women respectively. The results point up an important implication for recruiting women into the "nontraditional" (for women) jobs, to increase women's representation in electromechanical repair/operation type jobs—that rather than "sell" these jobs to women applicants at the recruiting station (walk-ins), recruiting might be more effective by going to technical/vocational schools to target women already showing interest in these types of jobs.

As to men's and women's perception of the relationship/similarity of their Navy and civilian job interests, there was little difference (C34). About two thirds of each thought there was "Very much" or "Much" relatedness.

By Season—Reasons, Trends, Influencers

Across the time points of the samples, by "single most" reason, High-tech training (Q05) and Preparation for a civilian job (Q17) continued to be at or near the top reasons they joined (C35, C36). The travel (Q21) reason decreased, and interest in G.I. Bill (Q12) increased. There were smaller changes in the more stable, continuous-type scale, "how much influence" (a + b), and not always in the same direction as the "single most" scale (C37).

Most summertime accessions (69%) had enlisted during their senior year (Q141, C38), and almost all the other high school graduates were working (14%) or attending college (5% part time, 6% full time). Most of them had joined for 4YO (45%) or 6YO (34%), and 15% joined for the (then) new 2YO program (Q102).

Encouragement to join the Navy came from many sources (C39, Q28-37)—from family members, relatives, and teachers. The highest *discouragement* was from female friends (36%, Q35). News about the Navy provided strong encouragement (71%, Q28).

Changes in encouragement, as a result of the Gulf War, were generally positive (C40), particularly the recruit's self-motivation to join (Q94). However, *discouraging* influence from the mother was greater (51%, Q95), and from spouse (31%, Q97), and friends (male 34%, Q98; female 63%, Q99). Although not displayed in C40 (men's sample), *discouraging* influences from *women* recruits' friends were also very high—women's male friends 48% (Q98), and female friends 59% (99).

First Thoughts About Joining the Navy

The results of the question about when the recruit first thought about joining the Navy (Q48, C41) has very important implications. Most (84%) recruits thought about it long before their senior year—31% while in 9th grade, 19% in 10th, and 34% in 11th grade. Thus, although recruiter and ASVAB impact (Q74/75/83, C29) was greater than media ads (Q66-69/71-73) *at the time* that the recruit joined, it is the impact of media ads, especially electronic media (as well as news and docudrama about the Navy), that reach youth in those earlier grades.

Conclusions

1. Of 25 reasons to join the Navy, the top three were for high-tech training, civilian job preparation, and travel; but the trend is for less interest in travel and more interest in G.I.Bill (C42). However, of perhaps greater importance for designing ads and developing recruiter strategies, is that there are *many* important reasons, not just a "single most."
2. Of various recruiting ad media, highest influence is from Navy brochures, then TV and mail. All ad media have a greater influence on LoCat (lower mental category) than on HiCat applicants.
3. The recruiter greatly increases applicant interest by helping the applicant become aware of specific opportunities in the Navy, particularly when the recruiter advises HiCat applicants of opportunities available from ASVAB scores.
4. Most recruits thought about joining the Navy long before their high school senior year. Thus, it is important for various media ads to reach youth in earlier grades.
5. The percentage of women interested in electromechanical jobs (so-called "nontraditional" jobs for women) is relatively small, and may account in part for failure to achieve quotas for women to enter these jobs. Nonetheless, 3 to 7% of women did express interest in these jobs. For recruiting strategy, these results suggest that it may be more effective to go to technical/vocational schools where women have already shown interest in these jobs, rather than try to "sell" these jobs to women applicants at the recruiting station (walk-ins).
6. These New Recruit Survey (NRS) results provide information for design of ad content, relative impact of ads and recruiters on particular subgroups, and curricula in Navy Recruiting Orientation Unit (NORU) courses (C43, C44).
7. Compared to previous NRS surveys, this project improved the quality and usefulness of the survey data by using an electronically scanned format, identifying seasonal differences among entry groups, substantially broadening the database with master personnel, training, and attrition files, and creating subgroups for comparisons of special interest (C45).

Recommendations

1. Because most recruits identified many reasons/opportunities that strongly influenced their decision to join the Navy, recruiting ads need to highlight a great variety of opportunities.
2. For the Navy to compete effectively for high quality people, sites to administer the ASVAB should be maximized. That is because high-quality applicants are strongly influenced when recruiters tell them what opportunities and specific programs are available from their ASVAB scores.
3. The ways in which highly effective recruiters stimulate applicant interest, as documented in these results, should be incorporated in curricula of the NORU courses.

Appendix A
Briefing Charts

Chart 1

NEW RECRUIT SURVEY (NRS)

OBJECTIVE

- Assess effectiveness of recruiting incentives, advertising and applicant processing
- Provide input data for trade-off analysis of resource allocation
- Reduce recruit attrition

SPONSORS

- PERS-23, CNET

Chart 2

PREVIOUS NAVY NRS WEAKNESSES (MAY87 AND APRIL89 AT RTC'S AND IN DEP)

- Anonymous - no background info. available on mental group, attrition, program enlisted for, H.S. senior in DEP, etc.
- Response scales mostly "categorical" (less precise than "continuous" type)
- Reported differences between '87 and '89 samples were probably from different mixes (age, program, etc.) in samples
- Results were reported in terms of "life goals," but without any evidence that a teenager considers such goals in the enlistment decision

Chart 3



Chart 4

PRESENT NRS '90 AND '91

IMPROVEMENTS

- With merged background data, can analyze specific subgroups of interest
- More reliable, precise data - - extracted from training and personnel files
- More efficient survey - - fewer items so shorter admin. time, because background items extracted from other files
- Electronically scanned - - faster results (30 days)
- More precise response scales to track changes over time, or compare subgroups

CONTENT AREAS OF QUESTIONS

- Reasons for joining, influencers, parent background, Ads awareness, Ads influence, Recruiter contact, special enlistment incentives, job interests

Chart 5

NRS SAMPLE Graduates

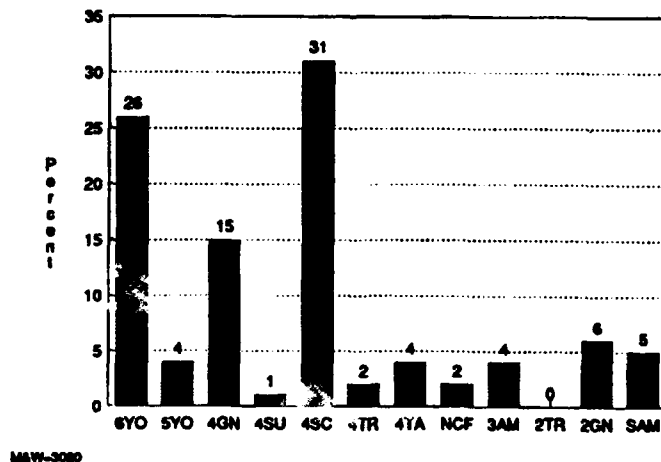
<u>Season</u>	<u>Men</u>	<u>Women</u>	<u>Total</u>
Summer 90	1300	290	1590
Winter 90-91	1150	280	1430
Summer 91	1500	400	<u>1900</u>
			4920

100% Return Rate, 99% usable

Additional Attrite Sample=670

Chart 6

PROGRAM ENLISTED FOR



MAW-3080

4GN 4 GENDET

NCF NAVY COLLEGE FUND

4SU 4 SUB

3AM AC-MARINER

4SC 4 SCHOOL/JOBS

2TR 2YO TAR

4TR RES. SCHOOL

2GN 2YO GENDET

4YA TARGETED A-3

SAM S-A MARINER

Chart 7

RACIAL AND ETHNIC MIX

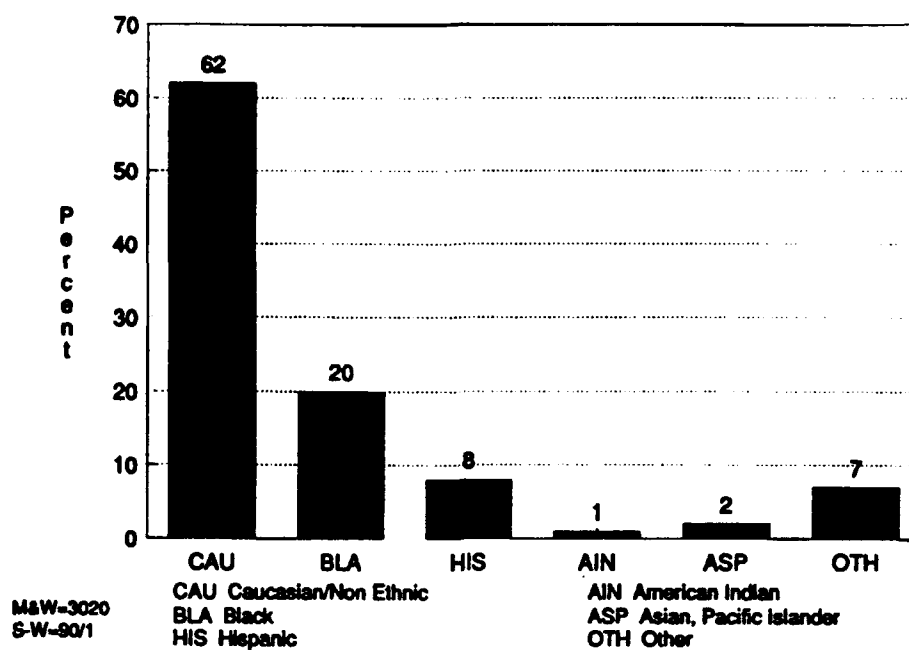


Chart 8

AGE AND MENTAL GROUP

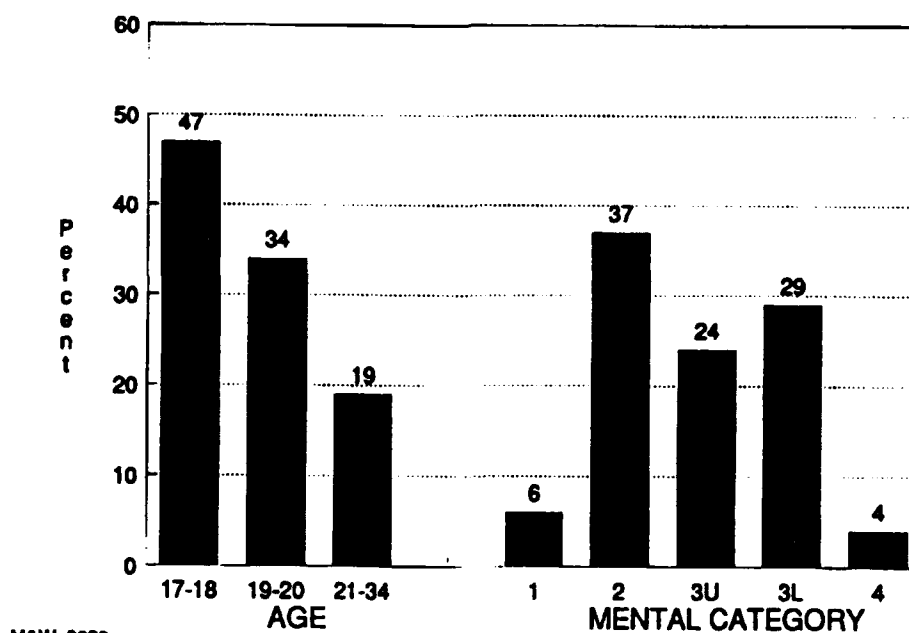


Chart 9

AGE BY SEASON
when entered by ACDU

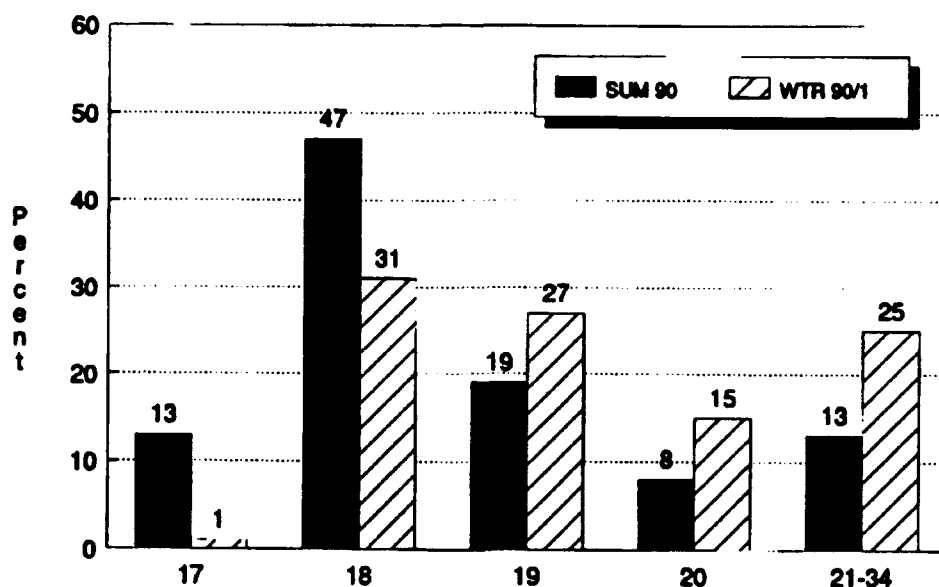


Chart 10

RESULTS PRESENTED FOR RECRUIT GRADUATES
USN Programs, Men

Then comparison of subgroups by

Age

Mental Category

Years Obligation (YO)

General Detail (GENDET) and School

Gender

High School Senior

Season: Summer 90 - Winter 90/91 - Summer 91

Chart 11**THREE MEASURES OF INFLUENCE**

<u>Type</u>	<u>Example</u>	<u>%</u>	<u>Av.</u>	<u>Rank</u>
Single Most (of 25 reasons)	Travel	13.2		1
	G.I. Bill	7.3		4.5
How Much (a & b) of 5-point scale	Travel	74		4
	G.I. Bill	67		11
Weighted Mean (average--av.)	Travel		4.11	4
	G.I. Bill		3.81	12

Chart 12**EXAMPLE TO CALCULATE WEIGHTED MEAN**

<u>Reason to Join</u>	<u>% How Much Influence</u>				
	Very Much <u>a</u>	Much <u>b</u>	Some <u>c</u>	Slight <u>d</u>	None <u>e</u>
Vocational Training	8	20	30	25	17

Mult. each percentage by scale weight: a=5 b=4 c=3 d=2 e=1

$$(8 \times 5) + (20 \times 4) + (30 \times 3) + (25 \times 2) + (17 \times 1)$$

Sum the products & divide by 100%: $277/100 = 2.77$ mean (av.)

Chart 13

RESULTS FOR USN PROGRAMS, MEN n=2060

- Reasons they joined - - "Single most"
"How much influence"
- Influence - - Encouraging and Discouraging
- Ad awareness • Ad impact
- Demonstration and Open House impact
- Recruiter/MEPS help and influence

Chart 14

REASONS THEY JOINED -- "SINGLE MOST"

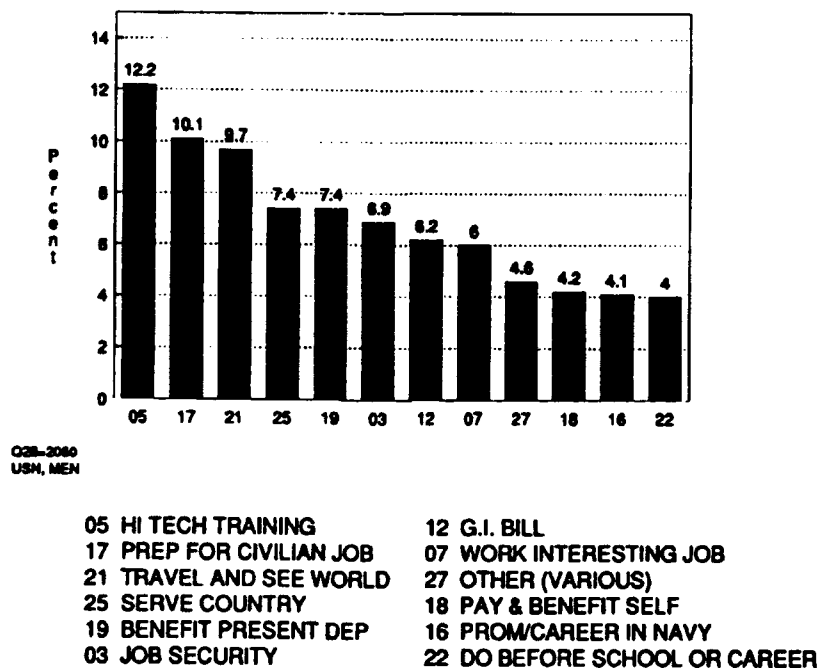


Chart 15

REASONS THEY JOINED -- TOP 12
very much or much influence (a+b)

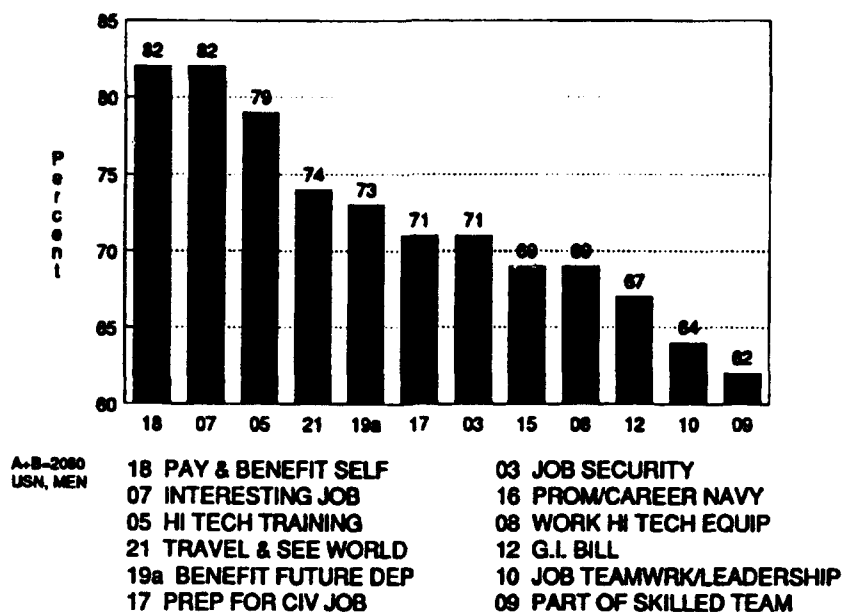


Chart 16

INFLUENCERS WHEN THEY JOINED
most encouraging and discouraging

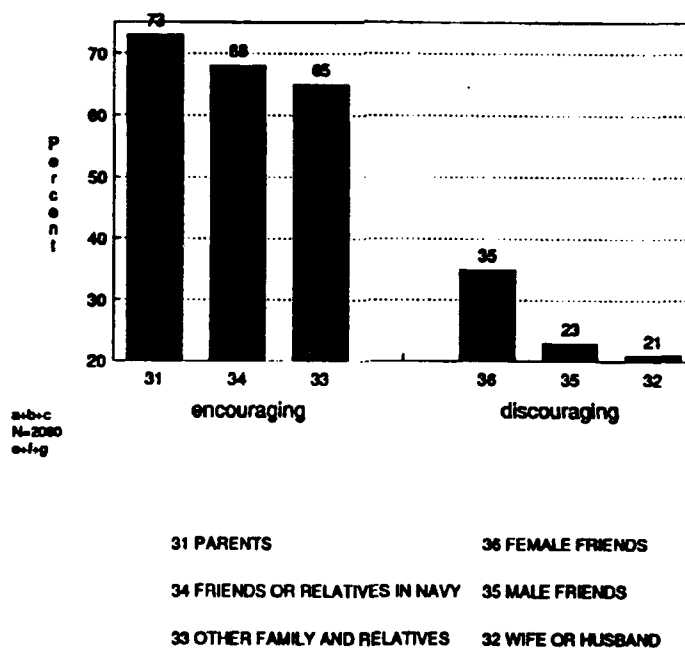


Chart 17

SAW/HEARD RECRUITING ADS OF EACH SERVICE

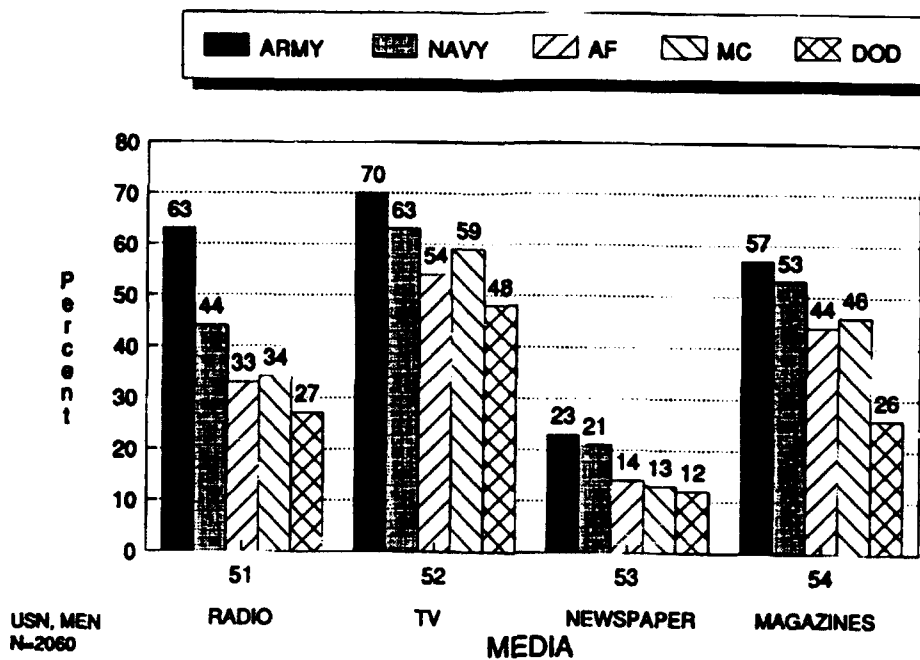


Chart 18

SAW/HEARD RECRUITING ADS OF EACH SERVICE

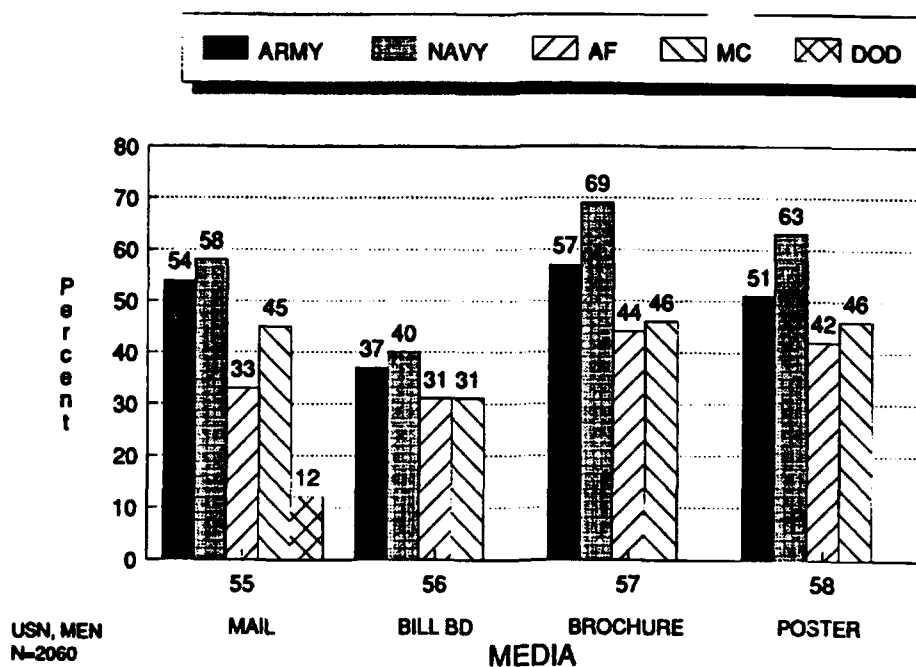
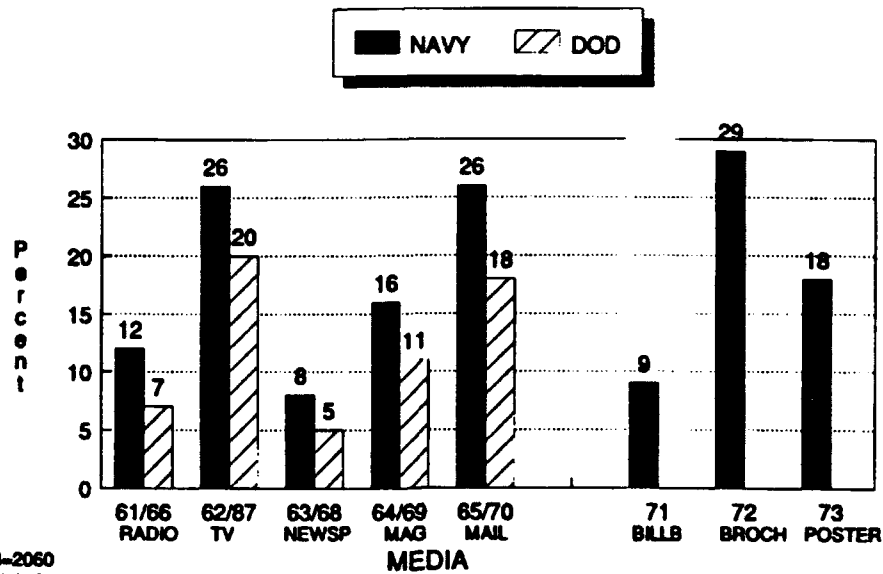


Chart 19

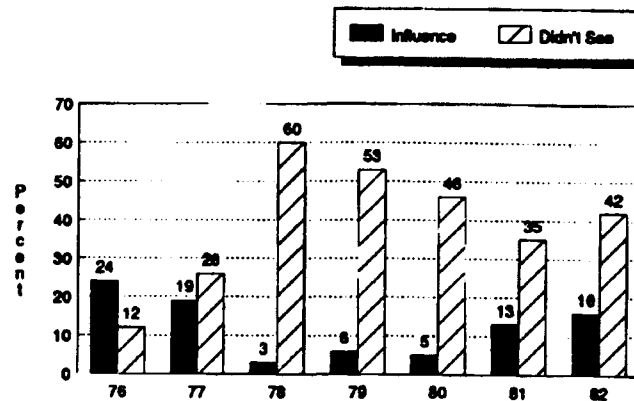
AD IMPACT very much or much influence



A+B-2060
USN, MEN

Chart 20

NAVY DEMO INFLUENCE very much or much influence



a+b, f
N=2080

76 MOVIE/TV

80 BAND

77 BLUE ANGELS

81 OTHER EXHIBITS

78 BALLON TEAM

82 OPEN HOUSE

79 PARACHUTE

Chart 21

RECRUITER/MEPS HELP

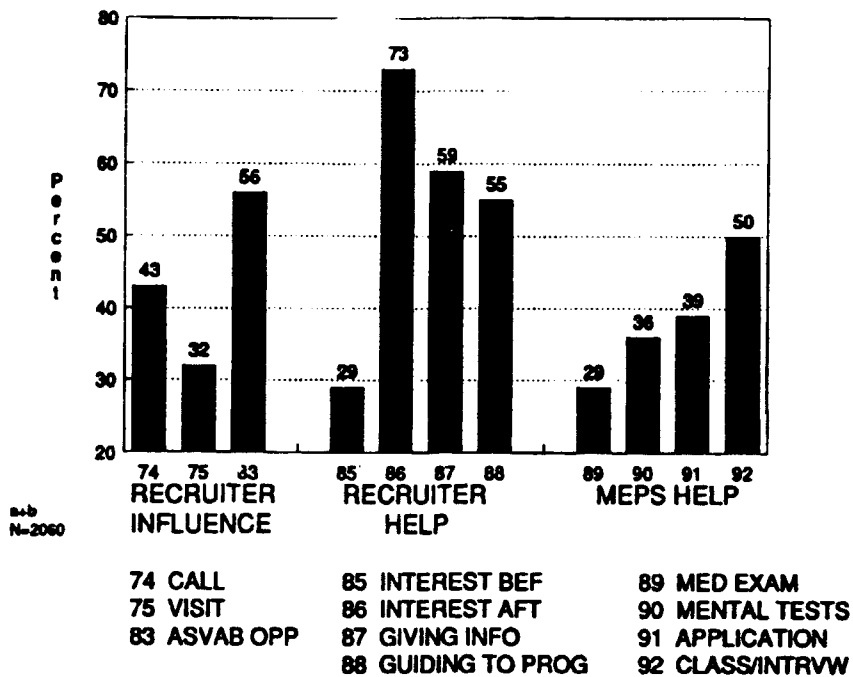


Chart 22

SUBGROUP COMPARISONS BY

• Age	17-18 n=733	19-20 n=583	21-34 n=314
• Years Obligation (YO) and GENDET/School	2YO GEN n=113	4YO GEN n=130	4YO SCL n=339
• Mental Category	Hi (Cat 1&2) n=787	Mid (Cat 3U) n=307	Lo (Cat 3L&4) n=536

Chart 23

**MENTAL CATEGORY AND CAREER INTENT
BY 2YO, 4YOGENDET, 4YOSCL**

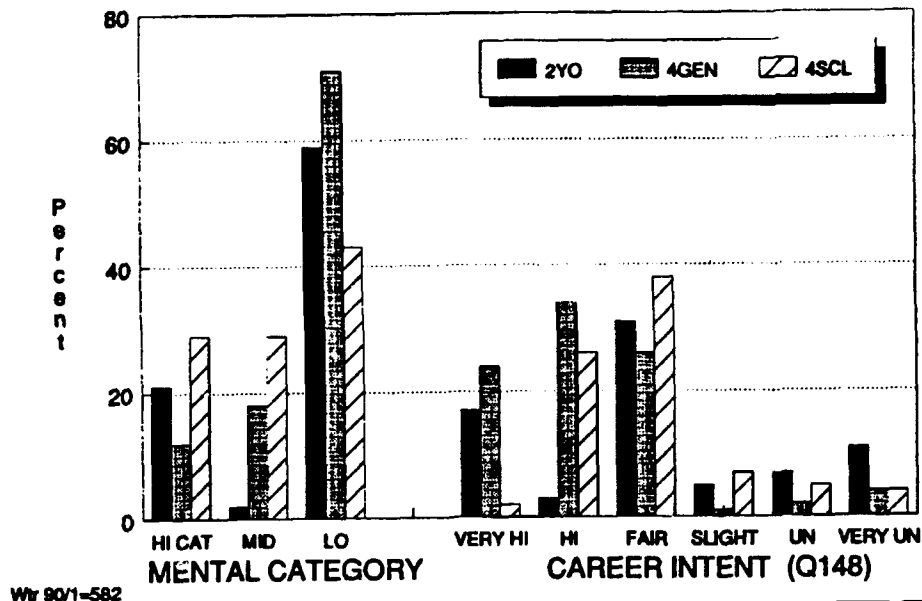


Chart 24

REASONS THEY JOINED - - "SINGLE MOST"
Comparison of 3 Age Groups

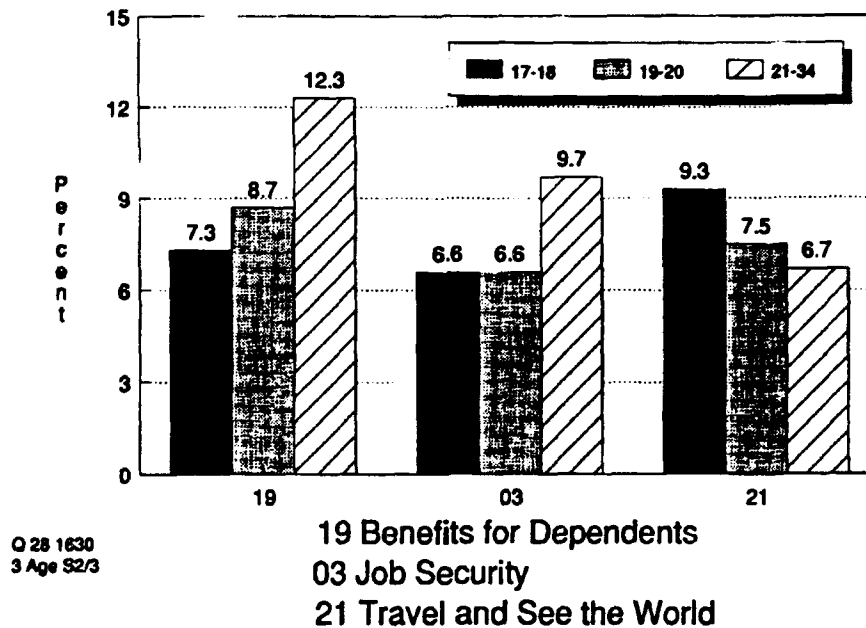


Chart 25

COMPARISON OF 3 AGE GROUPS

17-18 19-20 21-34

- REASONS THEY JOINED -- few differences, except
21-34: Higher Benefits for Dependents (Q19)
Higher Job Security (Q03)
Lower Travel and See World (Q21)
- DISCOURAGING INFLUENCERS
17-18: Higher from Female Friends (Q36)
(but still highest for all age groups)
- AD AND DEMO IMPACT (Q61-83) -- little difference

Chart 26

REASONS THEY JOINED - "SINGLE MOST"

Comparison of 3 Mental Groups

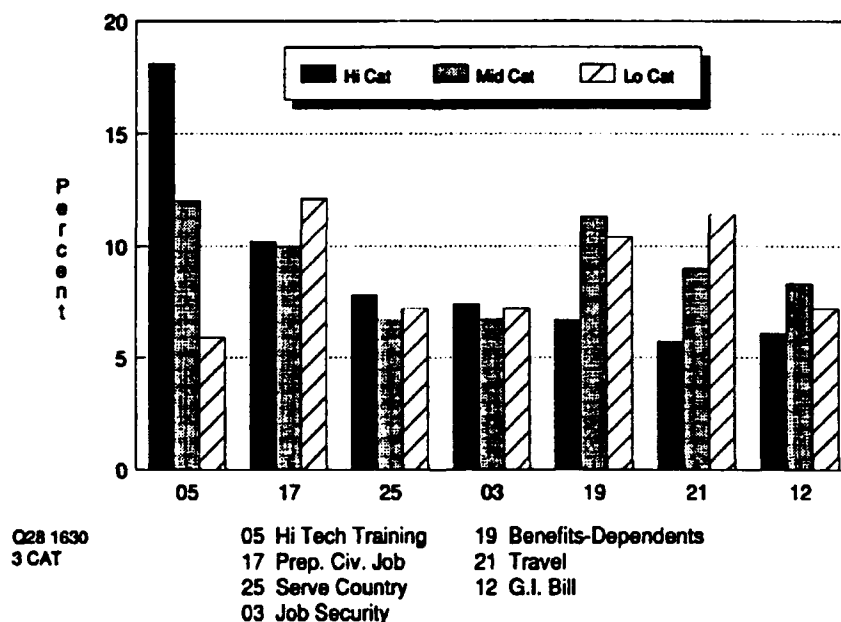


Chart 27

AD IMPACT BY 3 MENTAL GROUPS
Navy Ads

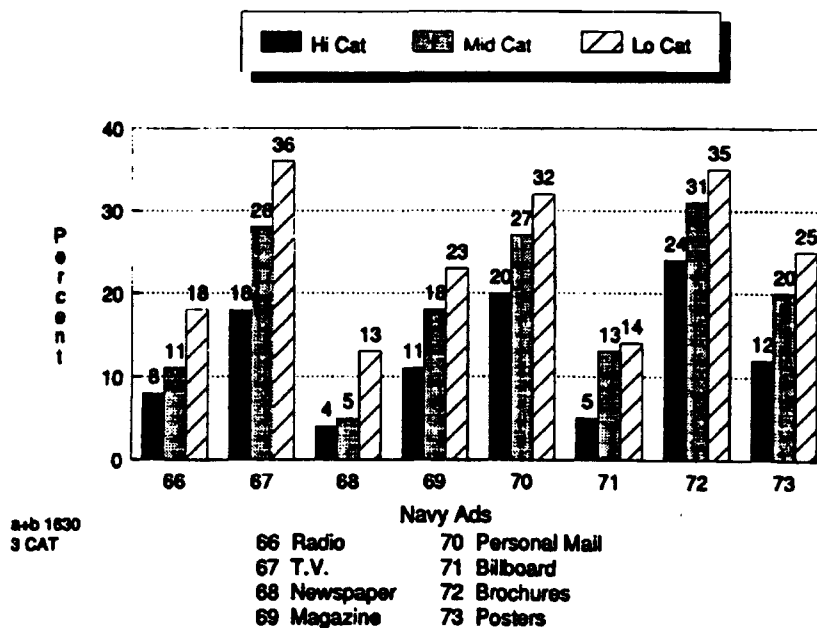


Chart 28

AD IMPACT BY 3 MENTAL GROUPS
DOD Ads

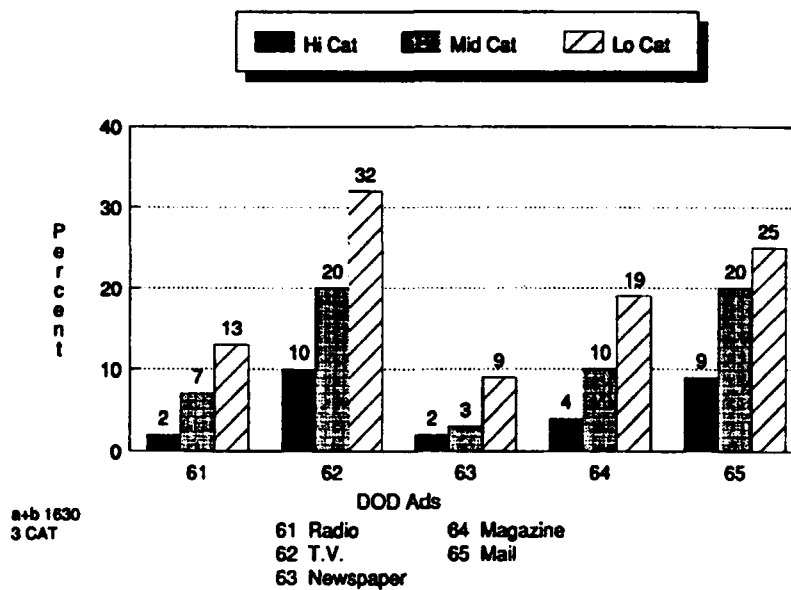


Chart 29

**RECRUITER/ASVAB/AD IMPACT
By 3 Mental Groups**

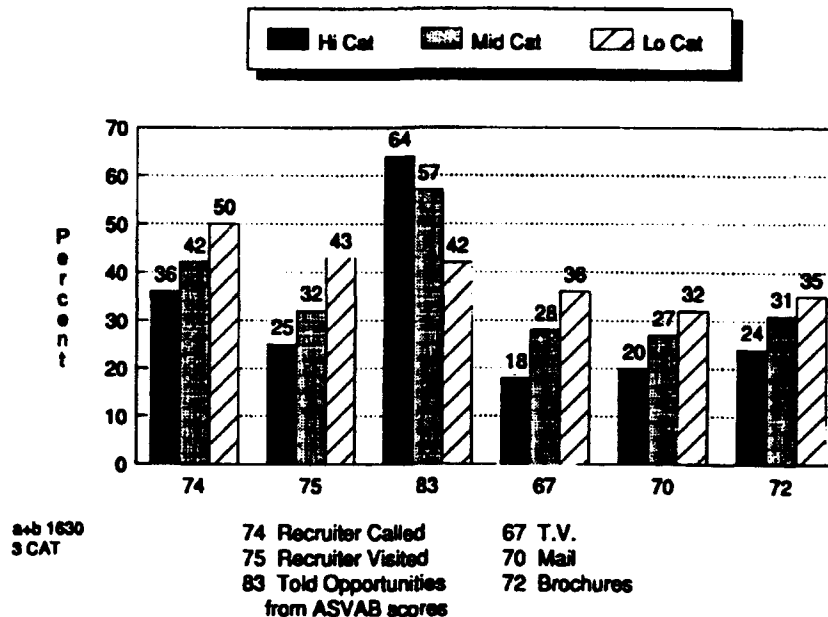


Chart 30

**COMPARISON OF 3 MENTAL GROUPS
Hi (Cat. 1&2), Mid (3U), Lo (3L&4)**

- Reason they joined - - "Single most"
Hi/Mid Cat: Hi Tech Training (Q05)
All 3 Cat: Civ. Job Prep. (Q17)
Lo Cat: Travel (Q21)
- Reason they joined - - How much influence (a+b)
Number of 24 reasons marked greater than 60%:
11 by HiCat 14 by MidCat 18 by LoCat
- Greatest Ad Impact
TV and Brochures for LoCat
Brochures and Mail for Hi/Mid Cat
All Ads for LoCat
- Greatest Recruiter Impact
Call on LoCat
ASVAB results for HiCat

Chart 31

SUBGROUP COMPARISONS BY

- **SEASON**
Age 17-18, USN

SUM90A	SUM90	Wtr90/1	SUM91
n=286	n=408	n=325	n=898
- **Summer 91 New Questions** n=1516
 HS Senior, 4/5/6YO n=898
 Encouraging and discouraging influences
 In which grade 1st thought to join Navv
- **Gender**

Men	Women
n=2060	n=439
Reasons they joined	Civilian job interests

Chart 32

REASONS THEY JOINED -- SINGLE MOST (Q28) Comparison of Men and Women

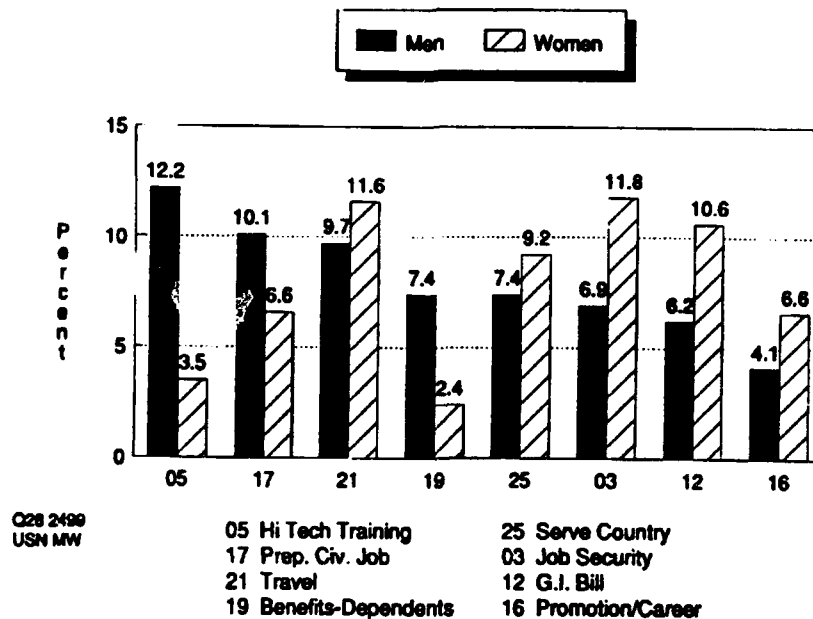


Chart 33

CIVILIAN JOB INTERESTS (Q145)
Comparison of Men and Women

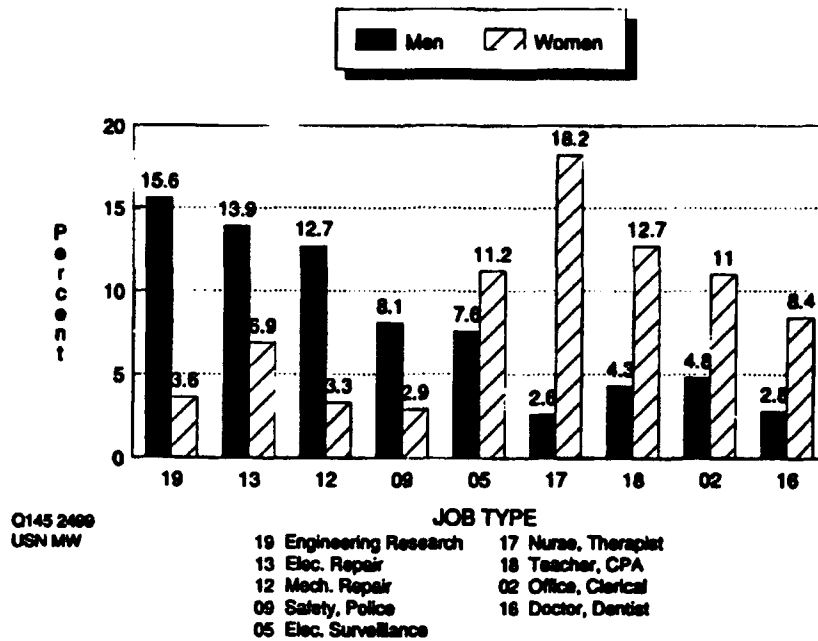


Chart 34

**RELATION OF NAVY & CIVILIAN
JOB INTERESTS (Q147)**
Comparison of Men and Women

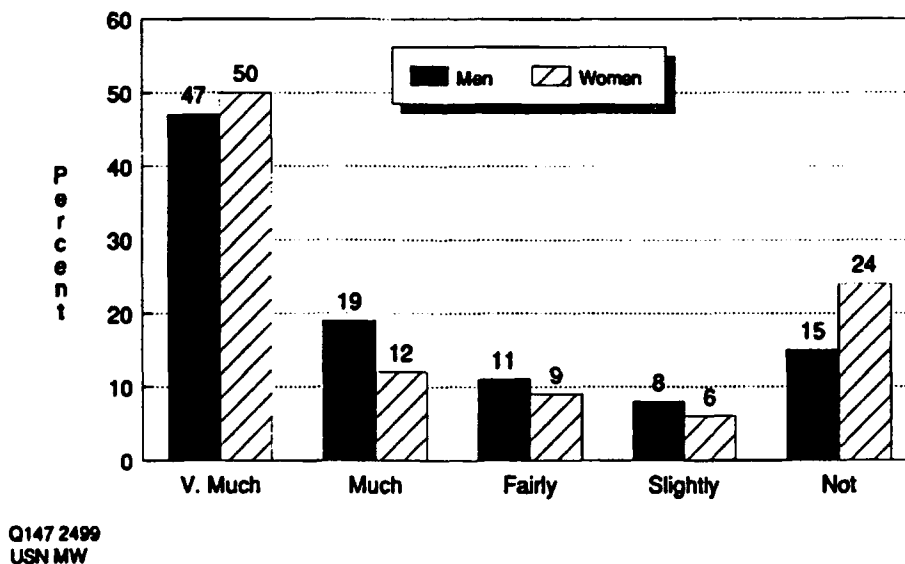


Chart 35

TREND IN REASONS THEY JOINED SUMMER90 - WINTER90/91 - SUMMER91 (AGE 17-18)

- Age and Program mix varies from Summer to Winter
-- Need to track similar subgroup samples
- Greatest changes appear in "Single Most" ranks
Continue high (within top 3):
Hi Tech Training & Prepare For Civilian Job
Decreases: Travel Increases: G.I. Bill
- Little change in "How much influence" (a+b), and not
always in the same direction as "Single Most"
- Both measures provide important information

Chart 36

TREND IN 4 REASONS THEY JOINED "SINGLE MOST" RANK

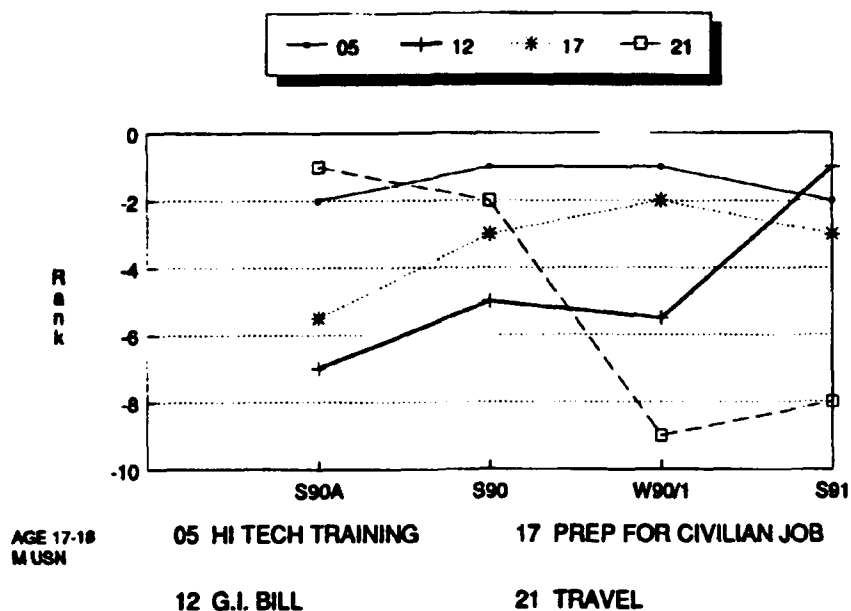


Chart 37

TREND IN 4 REASONS THEY JOINED
very much and much influence (a+b) rank

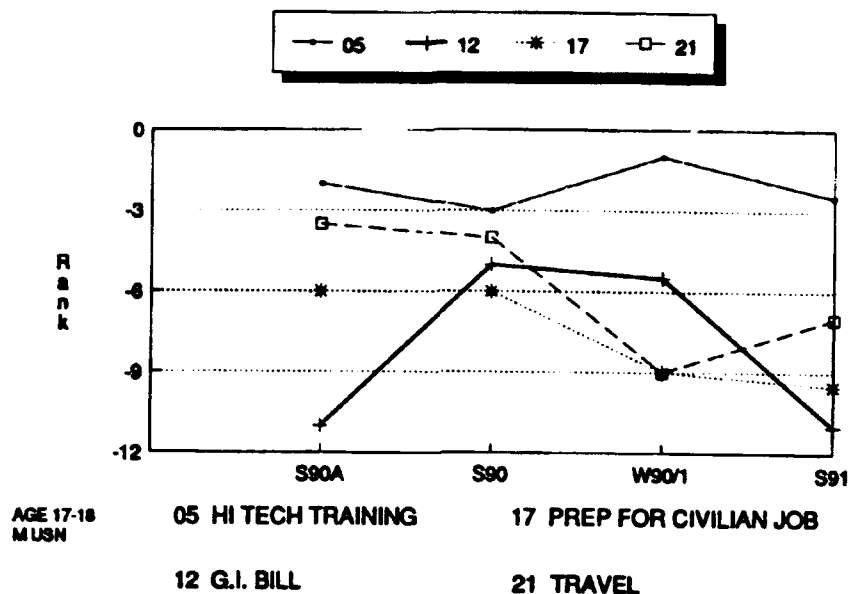


Chart 38

SCHOOL STATUS WHEN JOINED AND ACDU YO
Summer 91 Men

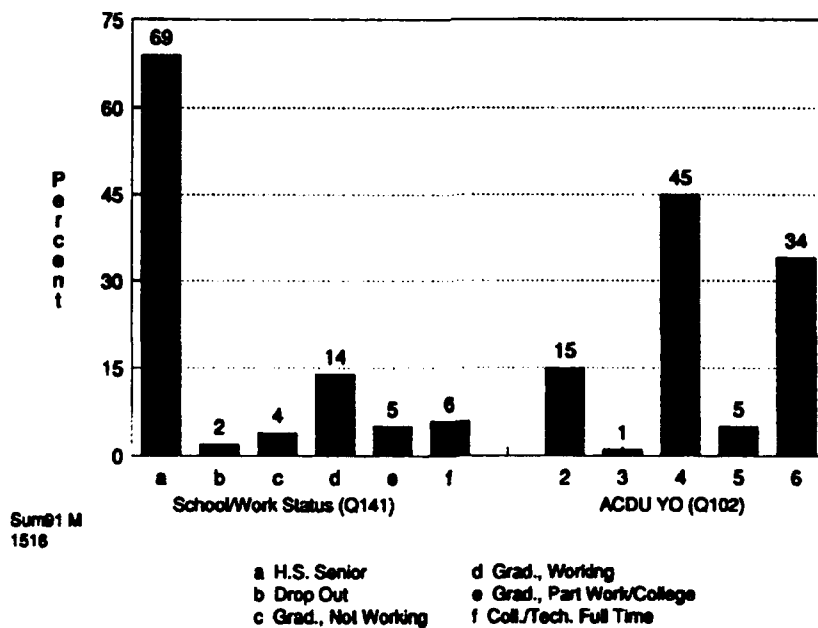


Chart 39

INFLUENCERS WHEN THEY JOINED
Encouraging (a+b+c) and
Discouraging (e+f+g)

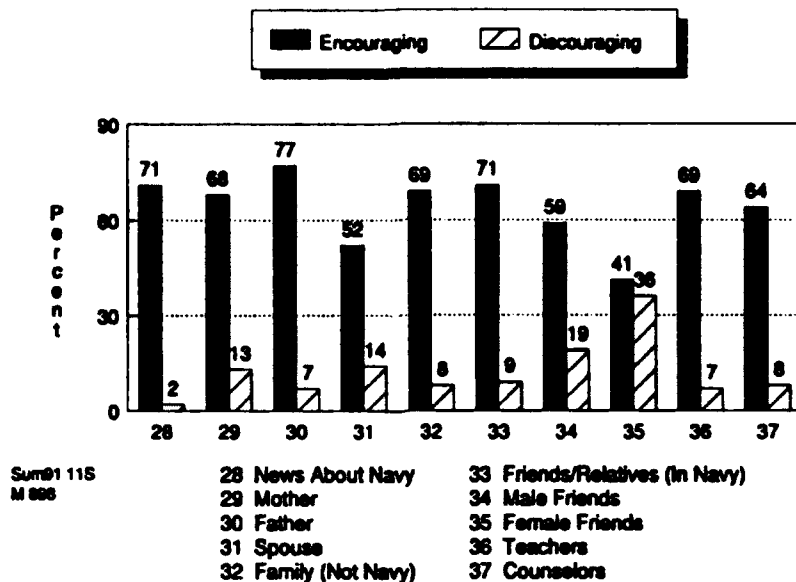


Chart 40

CHANGE FROM INFLUENCE OF GULF WAR
More Encouraging (a+b+c) and
More Discouraging (e+f+g)

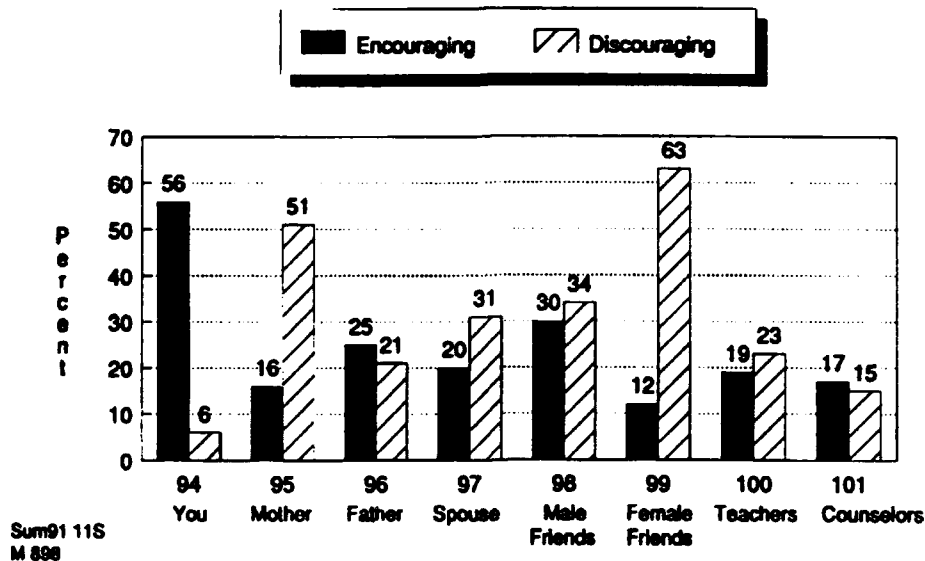
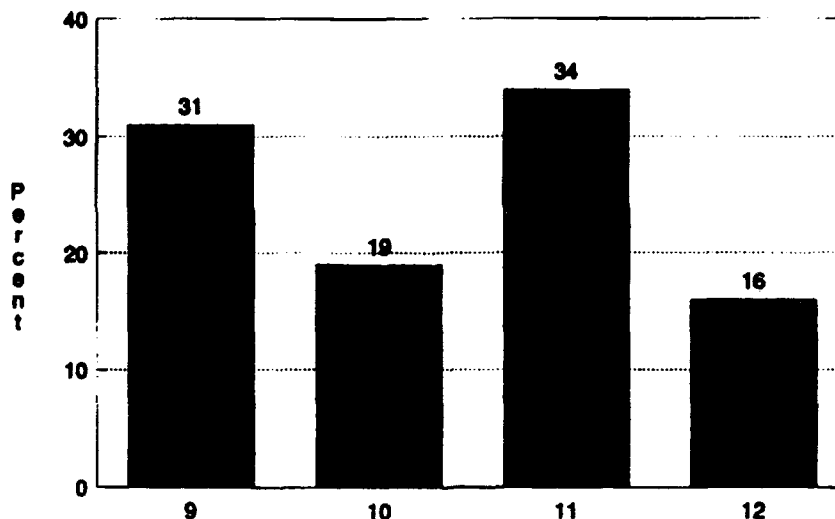


Chart 41

**GRADE WHEN FIRST THOUGHT ABOUT JOIN NAVY
Or Some Military Service (Q48)**



Sum91 11S
M 888

Chart 42a

SUMMARY OF RESULTS

TOP REASONS THEY JOINED

- HiTech training, Prep. for Civ. job, Travel - - accounts for 33% of 25 reasons
- But trend is toward less interest in travel, more interest in G.I. Bill
- There are many very important reasons, not just a "single most"

INFLUENCERS

- Most encouraging - - parents, and friends/ relatives now/were in Navy
- Most discouraging - - female friends
- Since Gulf War, great increase in discouragement from female friends and mothers
- Little discouragement from Teachers/Counselors

AD AWARENESS

- Navy TV and Radio nearly as high as Army
- Navy Mail, Brochures, Posters higher than Army

Chart 42b

(SUMMARY OF RESULTS - - CONT.)

AD IMPACT

- Highest influence from Navy Brochures, TV, Mail
- Greatest influence on LoCats

RECRUITER HELP

- Greatly increases applicant interest
- Highest influence - - Tell opportunities from ASVAB scores, greatest influence on HiCats

GENDER DIFFERENCES

- Top reason they joined - - Men for HiTech training, Women for Job security
- Both consider Navy and civilian job interests to be related (very/much/fairly a+b+c=77% for men, 71% for women)

WHEN FIRST THOUGHT ABOUT JOIN NAVY

- Most started thinking about it before 12th grade

Chart 43

NRS RESULTS PROVIDE

- Guidance for Ad content
- Info on relative impact of Ads and Recruiters on particular subgroups, for example, ASVAB results on HiCats
- Input for NORU curriculum - - relative impact of what works for which subgroups, and recruiter's opportunity to be highly effective
- For retention and attrition research - - baseline data on entry motivations and background factors to track through first enlistment

Chart 44

IMPLICATIONS

- **Must analyze and track subgroups separately, especially for Mental Group and Gender**
- **In total accessions, Program and Age mixes vary seasonally and periodically**
- **Reasons they joined - - varies by "Single most" and "How much influence," but both measures are useful**

Chart 45

ACCOMPLISHMENTS

- **Developed survey categories and items**
- **Redesigned NRS in opscan format**
- **Administered semiannual samples (1800 each) at RTC's - - Summer 90, Winter 90-91, Summer 91**
- **Developed data base that merges NRS responses with CNET training/attrition file and CRUITCOM PRIDE file**
- **Created and compared subgroups of specific interest - - Hi vs. Lo aptitude, 2YO vs. 4YO, Age, Gender, etc.**
- **Demonstrated differences in influencers between sub groups, for example, Hi vs. LoCat ASVAB counseling**

Appendix B
1990-1991 Navy Survey
of New Recruits



1990-1991

NAVY SURVEY OF NEW RECRUITS



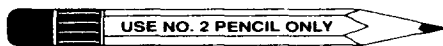
PURPOSE

This survey will help us to publicize better information about Navy opportunities. WE NEED YOUR HELP. Please tell us about: Your job interests; what your friends, family, and teachers think; and how helpful Navy advertising and recruiters were--in your decision to enlist.

Your answers will be seen and used only by the research organization, will remain confidential, and will be used only to calculate percentages of responses from all recruits surveyed at all training centers. We ask for your Social Security No. so that we can locate your test scores and other background information from your application records, thereby saving you the time and bother of providing it.

Privacy Act: These data are collected under authority of 5 U.S. Code Dept. Regs. and are used for research purposes only. Providing information in this survey is voluntary. Failure to respond to any particular question will not result in any penalty.

MARKING INSTRUCTIONS



CORRECT MARK: ○ ● ○ ○
INCORRECT MARKS: ⊗ ⊙ ⊖ ⊕

Make black marks that fill the circle. Erase cleanly and completely any changes you make. Do not make stray marks on the form.

START

NAME (LAST, FIRST, MIDDLE INITIAL)

WHAT IS YOUR COMPANY NUMBER?

01. SOCIAL SECURITY NUMBER

0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9

02. WHAT IS YOUR TRAINING CENTER?

a. Great Lakes	(a)
b. Orlando (Men's Co.)	(b)
c. Orlando (Women's Co.)	(c)
d. San Diego	(d)

Navy Personnel Research and Development Center
San Diego, California 92152-6800

People join an organization for the OPPORTUNITIES that it offers. Some are more applicable than others. Please tell us HOW MUCH INFLUENCE each of the following reasons had on your decision to join the Navy.

OPPORTUNITIES/REASONS	How MUCH INFLUENCE: (mark a circle for each Opportunity)				
	a. Very much	b. Much	c. Some	d. Slight	e. None
03. Job security	a	b	c	d	e
04. Retirement benefits	a	b	c	d	e
05. HI Tech training	a	b	c	d	e
06. Vocational training	a	b	c	d	e
07. Work in job of interest to me	a	b	c	d	e
08. Work with HI Tech equipment	a	b	c	d	e
09. Be part of a highly skilled team	a	b	c	d	e
10. Learn job teamwork and leadership	a	b	c	d	e
11. Eligibility for veterans benefits	a	b	c	d	e
(Funds for future education--reasons 12, 13, 14, 15)					
12. Montgomery G.I. Bill	a	b	c	d	e
13. Navy College Fund (NCF)	a	b	c	d	e
14. Navy Technical Scholarship Program (NTSP)	a	b	c	d	e
15. Enlistment Bonus (EB)	a	b	c	d	e
16. Promotion and career in Navy	a	b	c	d	e
17. Preparation for a civilian job	a	b	c	d	e
18. Pay and benefits (such as medical care) <u>for me</u>	a	b	c	d	e
19. Provide benefits for my <u>present</u> spouse and child, such as medical care (if no <u>present</u> dependents, skip to Question 19a)	a	b	c	d	e
19a. Provide benefits for <u>future</u> spouse or child, such as medical care	a	b	c	d	e
20. Be part of a disciplined organization	a	b	c	d	e
21. Travel and see the world	a	b	c	d	e
22. Doing something before continuing in school or starting a career	a	b	c	d	e
23. Getting away from conditions at home	a	b	c	d	e
24. Serve in the Navy	a	b	c	d	e
25. Serve my country	a	b	c	d	e
26. Be "on my own" in new areas	a	b	c	d	e
27. Any other? (write in) (if not, skip to question 28.)	a	b	c	d	e

42. When you enlisted, were you living:

- | | | | |
|---|-----|--|-----|
| a. With both your biological (natural) parents? | (a) | g. At a school dorm or a shared rental for school? | (g) |
| b. With a parent and a step parent? | (b) | h. On your own? | (h) |
| c. With a single parent? | (c) | i. Other? (write in) | |
| d. With adoptive parents? | (d) | | |
| e. With a relative, guardian or friend? | (e) | | |
| f. In a foster home or county/state/ church facility? | (f) | | |

(If your answer to Question 42 was a, b, or c, skip to Question 44).

43. If your answer to Question 42 was d, e, f, g, or h: before you lived there, were you living:

- | | | | |
|-------------------------------------|-----|---|-----|
| a. With both your parents? | (a) | d. With adoptive parents? | (d) |
| b. With a parent and a step parent? | (b) | e. With a relative, guardian or friend? | (e) |
| c. With a single parent? | (c) | f. In a foster home or a county/state/ church facility? (disregard for 42.f.) | (f) |

44. When you last lived with parent(s), relative, or guardian, who was the head of that household?

- | | | | |
|----------------|-----|------------------------------------|-----|
| a. Father | (a) | f. Grandmother | (f) |
| b. Mother | (b) | g. Uncle | (g) |
| c. Stepfather | (c) | h. Aunt | (h) |
| d. Stepmother | (d) | i. Legal guardian other than above | (i) |
| e. Grandfather | (e) | | |

45. Before you enlisted, what did the head of the household identified in Question 44 feel about you joining the Navy?

- | | | | |
|---|-----|--|-----|
| a. Approved or encouraged me to join the Navy | (a) | c. Discouraged me from joining any service | (c) |
| b. Encouraged me to join, but a different service | (b) | d. Expressed no interest in my decision | (d) |
| | | e. We did not discuss it | (e) |

46. After you enlisted, what did the head of the household feel?

- | | | | |
|-------------------------------|-----|--|-----|
| a. Approved of my decision | (a) | c. Expressed no opinion of my decision | (c) |
| b. Disapproved of my decision | (b) | d. We did not discuss it | (d) |

47. When you enlisted, were your biological (natural) parents living together?

- | | | | |
|--------|-----|-----------------------------|-----|
| a. Yes | (a) | c. Don't know | (c) |
| b. No | (b) | d. One or both are deceased | (d) |

(If your answer to Question 47 was a., skip to Question 49).

48. If the answer to Question 47 was b, c, or d: What age were you when they no longer lived together?

- | | | | |
|-------------------------------|-----|----------------------------|-----|
| a. Less than 1 year old | (a) | d. Older than 15 years old | (d) |
| b. Between 1 and 10 years old | (b) | e. Don't know | (e) |
| c. 11 to 15 years old | (c) | | |

a. Navy for 2-8 years (a) e. Another service for 9-19 years (e)
b. Navy for 9-19 years (b) f. Another service for 20 or more years (f)
c. Navy for 20 or more years (c) g. No military service or less than 2 years (g)
d. Another service for 2-8 years (d) h. I don't know if my father served in the military (h)

a. Navy for 2-8 years (a) e. Another service for 9-19 years (e)
b. Navy for 9-19 years (b) f. Another service for 20 or more years (f)
c. Navy for 20 or more years (c) g. No military service or less than 2 years (g)
d. Another service for 2-8 years (d) h. I don't know if my mother served in the military (h)

Before you decided to enlist, from what advertising sources did you see or hear about each service? Mark all that you saw/heard, but if you didn't see/hear about any service from this source, mark "No service" (col. f).

[illegible]

5

HOW MUCH INFLUENCE did the advertising have on your decision to join the Navy?

HOW MUCH INFLUENCE:
(mark only one circle for each source)

a. Very much
b. Much
c. Some
d. Slight
e. None

ALL-SERVICES IN ONE ADVERTISEMENT

- 61. Radio
- 62. TV
- 63. Newspaper

- 64. Magazine
- 65. Personal mail

NAVY ADVERTISING

- 66. Radio
- 67. TV
- 68. Newspaper

- 69. Magazine
- 70. Personal mail
- 71. Billboard

- 72. Brochures
- 73. Posters
- 74. Telephone call from Recruiter

- 75. Recruiter's visit to school or job fair (does not include your call or visit to recruiter -- see later question)

a	b	c	d	e
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HOW MUCH INFLUENCE did the following have on your decision to join the NAVY?

HOW MUCH INFLUENCE:
(mark only one letter for each influence)

a. Very much
b. Much
c. Some
d. Slight
e. None
f. Didn't see or hear

76. Movie or TV (either fiction or docudrama) about Navy adventures

If you marked a, b, or c, what title(s)?

77. Navy Blue Angels (Flight Jet Demonstration Team)

78. Navy Hot Air Balloon Team

79. Navy Parachute Team

80. Navy Band

81. Other Navy demonstrations or exhibits

82. Navy base or ship "open house" visit

83. Taking the military aptitude (ASVAB) tests, and being told what Navy program(s) your test scores qualified you for, had how much influence

a <input type="radio"/>	b <input type="radio"/>	c <input type="radio"/>	d <input type="radio"/>	e <input type="radio"/>	f <input type="radio"/>
a <input type="radio"/>	b <input type="radio"/>	c <input type="radio"/>	d <input type="radio"/>	e <input type="radio"/>	f <input type="radio"/>
a <input type="radio"/>	b <input type="radio"/>	c <input type="radio"/>	d <input type="radio"/>	e <input type="radio"/>	f <input type="radio"/>
a <input type="radio"/>	b <input type="radio"/>	c <input type="radio"/>	d <input type="radio"/>	e <input type="radio"/>	f <input type="radio"/>
a <input type="radio"/>	b <input type="radio"/>	c <input type="radio"/>	d <input type="radio"/>	e <input type="radio"/>	f <input type="radio"/>
a <input type="radio"/>	b <input type="radio"/>	c <input type="radio"/>	d <input type="radio"/>	e <input type="radio"/>	f <input type="radio"/>

NAVY RECRUITER CONTACT

84. What was your first contact with a Navy recruiter?

- | | | | |
|----------------------------|-----------------------|--|-----------------------|
| a. I called the recruiter | <input type="radio"/> | d. I met the recruiter at school or job fair | <input type="radio"/> |
| b. The recruiter called me | <input type="radio"/> | e. I met the recruiter some other place | <input type="radio"/> |
| c. I visited the recruiter | <input type="radio"/> | | |

HOW STRONG WAS YOUR INTEREST:

- a. Very strong
b. Strong
c. Fairly strong
d. Slight
e. None

85. Before your first contact with the Navy recruiter, how strong was your interest in joining the Navy?

a	b	c	d	e
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

86. After the recruiter gave you more details about Navy opportunities, how strong was your interest in joining the Navy?

HOW HELPFUL:

- a. Extremely
b. Very
c. Fairly
d. Somewhat
e. Barely
f. Not

HOW HELPFUL was the Navy Recruiter(s) in:

87. Giving you information on Navy programs, opportunities, benefits?

88. Guiding you toward specific programs for your particular interests, qualifications, and military aptitude test scores?

a	b	c	d	e	f
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

HOW HELPFUL AND COURTEOUS:

a. Extremely
b. Very
c. Fairly
d. Somewhat
e. Barely
f. Not

While you were at the processing center, how courteous and helpful were the staff at each of the following phases of your processing?

- 89. Medical examination
- 90. Mental (ASVAB, etc.) testing
- 91. Preparing application and personnel records paper work
- 92. Classification interview

a	b	c	d	e	f
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

93. Before you enlisted, which recruiters of other services did you visit or talk to about their opportunities?
MARK ALL THAT APPLY:

- | | | | |
|-----------------|-----------------------|--|-----------------------|
| a. Coast Guard | <input type="radio"/> | d. Air Force | <input type="radio"/> |
| b. Marine Corps | <input type="radio"/> | e. Reserves of any Service | <input type="radio"/> |
| c. Army | <input type="radio"/> | f. None, I was interested only in Navy | <input type="radio"/> |

NAVY ENLISTMENT INCENTIVE OPTIONS

There are various enlistment options and incentive programs for the particular interests, qualifications and needs of each man and woman. Here are brief descriptions, followed by a set of questions that refer to that option or program. Please answer the questions for all eight options.

School Guarantee (SG) vocational or technical training, of your choice from many job specialties, in a 4-year program. (Questions 94 to 99 refer to this option/program.)

94. Did you see or hear about this program/option before talking to a recruiter?

- a. Yes ☐ (a) b. No (If you marked b, "No," skip to Question 97) ☐ (b)

95. Where or how did you see or hear about this? (MARK ALL THAT APPLY)

- a. Friend ☐ (a) c. Advertisement ☐ (c)
b. Counselor or advisor ☐ (b) d. Other (write in) ☐ (d)

96. When you first saw or heard about it, how much interest did you have in visiting a recruiter to get more information?

- a. Very interested--I visited a recruiter ☐ (a) c. Slight interest ☐ (c)
b. Some interest--I thought about visiting a recruiter ☐ (b) d. No interest ☐ (d)
e. I didn't think I'd meet the requirements ☐ (e)

(If you answered Questions 95 and 96, skip to Question 98.)

97. If you had heard such a program/option was available, what would your interest level have been?

- a. Very high--I would have visited a recruiter ☐ (a) d. No interest ☐ (d)
b. Moderate ☐ (b) e. I don't think I would have met requirements ☐ (e)
c. Slight ☐ (c)

98. Did any recruiter or classifier discuss this option with you?

- a. Yes ☐ (a) b. No ☐ (b)

99. Did you enlist with or for this option?

- a. Yes ☐ (a) b. No ☐ (b)

NAVY ENLISTMENT INCENTIVE OPTIONS (Continued)

Sub Service (SS) Guarantee—assignment to sub duty and choice of East or West coast base, in a 4-year program. (Questions 100 to 105 refer to this option/program.)

100. Did you see or hear about this program/option before talking to a recruiter?

- a. Yes ☐ a b. No (If you marked b, "No," skip to Question 103) ☐ b

101. Where or how did you see or hear about this? (MARK ALL THAT APPLY)

- a. Friend ☐ a c. Advertisement ☐ c
b. Counselor or advisor ☐ b d. Other (write in) ☐ d

☐ d

102. When you first saw or heard about it, how much interest did you have in visiting a recruiter to get more information?

- a. Very interested--I visited a recruiter ☐ a c. Slight interest ☐ c
b. Some interest--I thought about visiting a recruiter ☐ b d. No interest ☐ d
e. I didn't think I'd meet the requirements ☐ e

(If you answered Questions 101 and 102, skip to Question 104.)

103. If you had heard such a program/option was available, what would your interest level have been?

- a. Very high--I would have visited a recruiter ☐ a d. No interest ☐ d
b. Moderate ☐ b e. I don't think I would have met requirements ☐ e
c. Slight ☐ c

104. Did any recruiter or classifier discuss this option with you?

- a. Yes ☐ a b. No ☐ b

105. Did you enlist with or for this option?

- a. Yes ☐ a b. No ☐ b

NAVY ENLISTMENT INCENTIVE OPTIONS (Continued)

Delayed Entry Program (DEP) offers "enlist now but go later"--delay active duty (for 1-12 months) until high school graduation, or until a training opening for your choice of job, or other reasons--in any 4, 5, or 6-year program. (Questions 106 to 111 refer to this option/program.)

106. Did you see or hear about this program/option before talking to a recruiter?

- a. Yes ☐ a b. No (If you marked b, "No," skip to Question 109) ☐ b

107. Where or how did you see or hear about this? (MARK ALL THAT APPLY)

- a. Friend ☐ a c. Advertisement ☐ c
b. Counselor or advisor ☐ b d. Other (write in) ☐ d

☐ d

108. When you first saw or heard about it, how much interest did you have in visiting a recruiter to get more information?

- a. Very interested--I visited a recruiter ☐ a c. Slight interest ☐ c
b. Some interest--I thought about visiting a recruiter ☐ b d. No interest ☐ d
e. I didn't think I'd meet the requirements ☐ e

(If you answered Questions 107 and 108, skip to Question 110.)

109. If you had heard such a program/option was available, what would your interest level have been?

- a. Very high--I would have visited a recruiter ☐ a d. No interest ☐ d
b. Moderate ☐ b e. I don't think I would have met requirements ☐ e
c. Slight ☐ c

110. Did any recruiter or classifier discuss this option with you?

- a. Yes ☐ a b. No ☐ b

111. Did you enlist with or for this option?

- a. Yes ☐ a b. No ☐ b

NAVY ENLISTMENT INCENTIVE OPTIONS (Continued)

These last 5 offer various additional incentives for particular hard-to-fill, highly technical or sea-intensive skills--by guaranteeing more training, faster advancement, bonuses, or college benefits--in exchange for 5 or 6-year programs in particular jobs. How attractive is each of these programs to you? Please answer the following questions about each option.

Advanced Electronics Field (AEF) in surface, air or sub jobs, guarantees technician training (electronic, fire control, sonar, data systems, missile, etc.) and accelerated advancement to petty officer (E-4), in a 6-year program. (Questions 112 to 117 refer to this option/program.)

112. Did you see or hear about this program/option before talking to a recruiter?

- a. Yes ☐ (a) b. No (If you marked b, "No," skip to Question 115) ☐ (b)

113. Where or how did you see or hear about this? (MARK ALL THAT APPLY)

- a. Friend ☐ (a) c. Advertisement ☐ (c)
b. Counselor or advisor ☐ (b) d. Other (write in) ☐ (d)
-

114. When you first saw or heard about it, how much interest did you have in visiting a recruiter to get more information?

- a. Very interested--I visited a recruiter ☐ (a) c. Slight interest ☐ (c)
b. Some interest--I thought about visiting a recruiter ☐ (b) d. No interest ☐ (d)
e. I didn't think I'd meet the requirements ☐ (e)

(If you answered Questions 113 and 114, skip to Question 116.)

115. If you had heard such a program/option was available, what would your interest level have been?

- a. Very high--I would have visited a recruiter ☐ (a) d. No interest ☐ (d)
b. Moderate ☐ (b) e. I don't think I would have met requirements ☐ (e)
c. Slight ☐ (c)

116. Did any recruiter or classifier discuss this option with you?

- a. Yes ☐ (a) b. No ☐ (b)

117. Did you enlist with or for this option?

- a. Yes ☐ (a) b. No ☐ (b)

NAVY ENLISTMENT INCENTIVE OPTIONS (Continued)

Nuclear Field (NF) in surface or sub jobs, guarantees power plant technician training and accelerated advancement to petty officer (E-4), in a 6-year program. (Questions 118 to 123 refer to this option/program.)

118. Did you see or hear about this program/option before talking to a recruiter?

- a. Yes ☐ a b. No (If you marked b, "No," skip to Question 121) ☐ b

119. Where or how did you see or hear about this? (MARK ALL THAT APPLY)

- a. Friend ☐ a c. Advertisement ☐ c
b. Counselor or advisor ☐ b d. Other (write in) ☐ d

120. When you first saw or heard about it, how much interest did you have in visiting a recruiter to get more information?

- a. Very interested--I visited a recruiter ☐ a c. Slight interest ☐ c
b. Some interest--I thought about visiting a recruiter ☐ b d. No interest ☐ d
e. I didn't think I'd meet the requirements ☐ e

(If you answered Questions 119 and 120, skip to Question 122.)

121. If you had heard such a program/option was available, what would your interest level have been?

- a. Very high--I would have visited a recruiter ☐ a d. No interest ☐ d
b. Moderate ☐ b e. I don't think I would have met requirements ☐ e
c. Slight ☐ c

122. Did any recruiter or classifier discuss this option with you?

- a. Yes ☐ a b. No ☐ b

123. Did you enlist with or for this option?

- a. Yes ☐ a b. No ☐ b

NAVY ENLISTMENT INCENTIVE OPTIONS (Continued)

Enlistment Bonus (EB) pays extra \$1500-\$5000 for 16 specific skills (technicians, machinist, cryptologic, gunner, etc.) and \$3000-\$6000 for nuclear skills (the EB amount varies with the month entered active duty), in 5 or 6-year programs, including DEP option. (But may elect only EB or NCF.) (Questions 124 to 129 refer to this option/program.)

124. Did you see or hear about this program/option before talking to a recruiter?

- a. Yes (a) b. No (If you marked b, "No," skip to Question 127) (b)

125. Where or how did you see or hear about this? (MARK ALL THAT APPLY)

- a. Friend (a) c. Advertisement (c)
b. Counselor or advisor (b) d. Other (write in)

 (d)

126. When you first saw or heard about it, how much interest did you have in visiting a recruiter to get more information?

- a. Very interested--I visited a recruiter (a) c. Slight interest (c)
b. Some interest--I thought about visiting a recruiter (b) d. No interest (d)
e. I didn't think I'd meet the requirements (e)

(If you answered Questions 125 and 126, skip to Question 128.)

127. If you had heard such a program/option was available, what would your interest level have been?

- a. Very high--I would have visited a recruiter (a) d. No interest (d)
b. Moderate (b) e. I don't think I would have met requirements (e)
c. Slight (c)

128. Did any recruiter or classifier discuss this option with you?

- a. Yes (a) b. No (b)

129. Did you enlist with or for this option?

- a. Yes (a) b. No (b)

NAVY ENLISTMENT INCENTIVE OPTIONS (Continued)

Navy College Fund (NCF) guarantees \$25,200 college education benefits (\$14,400 from Navy, and \$10,800 from G. I. Bill), and guarantees training in one of 30 skills open to men or 13 skills open to women, in 4-year or 6-year programs. (But may elect only NCF or EB.) (Questions 130 to 135 refer to this option/program.)

130. Did you see or hear about this program/option before talking to a recruiter?

- a. Yes (a) b. No (If you marked b, "No," skip to Question 133) (b)

131. Where or how did you see or hear about this? (MARK ALL THAT APPLY)

- a. Friend (a) c. Advertisement (c)
b. Counselor or advisor (b) d. Other (write in)

(d)

132. When you first saw or heard about it, how much interest did you have in visiting a recruiter to get more information?

- a. Very interested--I visited a recruiter (a) c. Slight interest (c)
b. Some interest--I thought about visiting a recruiter (b) d. No interest (d)
e. I didn't think I'd meet the requirements (e)

(If you answered Questions 131 and 132, skip to Question 134.)

133. If you had heard such a program/option was available, what would your interest level have been?

- a. Very high--I would have visited a recruiter (a) d. No interest (d)
b. Moderate (b) e. I don't think I would have met requirements (e)
c. Slight (c)

134. Did any recruiter or classifier discuss this option with you?

- a. Yes (a) b. No (b)

135. Did you enlist with or for this option?

- a. Yes (a) b. No (b)

NAVY ENLISTMENT INCENTIVE OPTIONS (Continued)

Navy Technical Scholarship Program (NTSP) pays \$1009 per month to currently enrolled full-time Junior college students with no dependents, while they complete the last 9 months of their associate degree, guarantees technician or hospital corpsman training, and provides accelerated advancement, in a 6-year program. (Questions 136 to 141 refer to this option/program.)

136. Did you see or hear about this program/option before talking to a recruiter?

- a. Yes (a) b. No (If you marked b. "No," skip to Question 139) (b)

137. Where or how did you see or hear about this? (MARK ALL THAT APPLY)

- a. Friend (a) c. Advertisement (c)
b. Counselor or advisor (b) d. Other (write in) (d)

138. When you first saw or heard about it, how much interest did you have in visiting a recruiter to get more information?

- a. Very interested--I visited a recruiter (a) c. Slight interest (c)
b. Some interest--I thought about visiting a recruiter (b) d. No interest (d)
e. I didn't think I'd meet the requirements (e)

(If you answered Questions 137 and 138, skip to Question 140.)

139. If you had heard such a program/option was available, what would your interest level have been?

- a. Very high--I would have visited a recruiter (a) d. No interest (d)
b. Moderate (b) e. I don't think I would have met requirements (e)
c. Slight (c)

140. Did any recruiter or classifier discuss this option with you?

- a. Yes (a) b. No (b)

141. Did you enlist with or for this option?

- a. Yes (a) b. No (b)

142. How much delayed entry time did you have between dates of enlistment and active duty?

- a. None or less than a month (a) d. 6-8 months (d)
b. 1-2 months (b) e. 9-10 months (e)
c. 3-5 months (c) f. 11-12 months (f)

WHAT ARE YOUR JOB INTERESTS?

Some jobs would be great to be in, but some are difficult to enter, because of required test scores or long training/schooling requirements. Also, some jobs have many more openings than others.

Military Job Interests

Look at the attached (green) list of 17 "Military Job Types" and Applicable Navy Ratings. Based on your estimate of your abilities to qualify to enter and complete the necessary or available training, and then do good work on the job, pick out the rating that you believe provides the best opportunity for you to be successful in the Navy. Write the abbrev. in the box, and mark the corresponding circles for question 143.

143. Your Navy RATING preference: (Write in the abbrev. (2 or 3-letter) from the right side of the green sheet.

A	A	A
B	B	B
C	C	C
D	D	D
E	E	E
F	F	F
G	G	G
H	H	H
I	I	I
J	J	J
K	K	K
L	L	L
M	M	M
N	N	N
O	O	O
P	P	P
Q	Q	Q
R	R	R
S	S	S
T	T	T
U	U	U
V	V	V
W	W	W
X	X	X
Y	Y	Y
Z	Z	Z

EXAMPLE: To mark
the AC rating

A	C	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Or to mark
the ABE rating

A	B	E
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

144. What do you think are your chances to enter the required or available training, or on-job apprenticeship, for this rating? (Note. If you enlisted for this rating/program, your chances are already "Very high"-- answer a.)

CHANCES:

- a. Very high
- b. High
- c. Fair

- ☐ a
- ☐ b
- ☐ c

- d. Slight
- e. Poor

- ☐ d
- ☐ e

Civilian Job Interests

After your Navy service, if you don't stay in the Navy, what kind of civilian job might you try to enter? Again, consider your abilities (and responsibilities to family, etc.) to enter and complete necessary training.

Select a job type and example from the attached (salmon color) list of 19 "Civilian Job Types." (Some are similar, some are different from the military list.)

145. Your civilian job type interest: (Write in the 2-digit code from the left side of the salmon sheet.)

0	0
1	1
	2
	3
	4
	5
	6
	7
	8
	9

146. Your civilian job example: (write in)

--

147. Comparing your Navy job preference (in question 143) and your civilian job interest, how related is the Navy job, for useful job experience?

- | | | | |
|--------------|-----|-------------|-----|
| a. Very much | (a) | d. Slightly | (d) |
| b. Much | (b) | e. Not | (e) |
| c. Fairly | (c) | | |

Outlook for Navy Service

148. Sure, it's a long way off, but what do you think are the chances that you may decide to continue on active duty beyond your initial contract?

CHANCES:

- | | | | |
|--------------|-----|------------------|-----|
| a. Very high | (a) | d. Slight | (d) |
| b. High | (b) | e. Unlikely | (e) |
| c. Fair | (c) | f. Very unlikely | (f) |

END OF SURVEY.

THANK YOU FOR SHARING YOUR JOB INTERESTS WITH US.

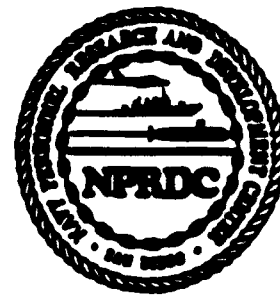
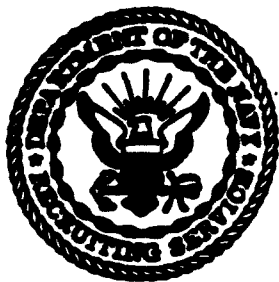
**DO
NOT
MARK
ON
THIS
PAGE**

•

•

Appendix C

Survey Instructions and Job Type List



1990-1991 NAVY SURVEY OF NEW RECRUITS

OPNAV RepSym. 1140-1

HOW TO FILL OUT THIS SURVEY

- Listen to the directions given before you begin.
- For each question, fill in the circle next to the answer(s) or write in the box the answer that best fits your opinion. Some questions should only have one answer. Others will direct you to mark all that apply.
- Follow the "how to" examples below and on the next page.
- If you have any questions, please raise your hand and someone will come around to help you.

HOW TO ANSWER THE QUESTIONS— EXAMPLES

Some questions require a number as an answer (such as "What is your age?") Write in the answer at the top of the grid, then fill in the corresponding circle in the column below. The answer in the example is 32.

3	2
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>

Some questions ask you to mark ONLY ONE answer:

What branch of the military are you entering?
(MARK ONLY ONE)

- ☐ a. ARMY
☐ b. AIR FORCE
☒ c. NAVY
☐ d. MARINES

Navy Personnel Research and Development Center
San Diego, California 92152-6800

HOW TO ANSWER THE QUESTIONS— EXAMPLES

Some questions ask you to mark an answer for each item in a list.

Please tell us HOW MUCH INFLUENCE each of the following reasons had on your decision to enlist.

OPPORTUNITIES/REASONS	How MUCH INFLUENCE: (mark a circle for each Opportunity)				
	a. Very much	b. Much	c. Some	d. Slight	e. None
Food	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Navy Uniform	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Physical Fitness	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other questions ask you to mark MORE THAN ONE answer (Questions 51-60 and 93):

Before you decided to enlist, from what advertising sources did you see or hear about each service? Mark all that you saw/heard, but if you didn't see/hear about any service from this source, mark "No service" (col. f).

(MARK ALL THAT APPLY)

ADVERTISING SOURCE	FROM WHICH SERVICE: (mark <u>all</u> that you saw/heard)					
	a. Army	b. Navy	c. Air Force	d. Marine Corps	e. All Services in one Ad	f. No Service
Billboard	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
TV	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Magazine	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

CIVILIAN JOB TYPES LIST

Choose a Job Type no., then choose one of the Job examples or write in your own (after "other") of particular interest to you. Write the Job type no. in the box at question 145, and the Job example at question 146.

JOB AREA

JOB TYPE (AND SOME EXAMPLES)

INFO PROCESSING

- 01 SALES
(Store, gas station, real estate, manufacturer's rep. door-to-door, other _____)
- 02 OFFICE OR CLERICAL
(Secretary, typist, cashier, bookkeeper, requisition/issue, data entry, receptionist, message processing, payroll, timekeeping, other _____)
- 03 GRAPHICS OR MEDIA
(Drafting, photography, illustrator, news reporting, advertising, other _____)
- 04 COMPUTER PROGRAMMING OR SOFTWARE DEVELOPMENT
(Other _____)
- 05 ELECTRONIC SURVEILLANCE
(Meteorology, air controller, satellite tracking, intelligence, other _____)

SERVICE

- 06 FOOD SERVICES
(Cook, waiter/waitress, caterer, other _____)
- 07 CLEANING
(Building, yard, clothes, car, carpet/draperies, other _____)
- 08 TRANSPORTATION, DELIVERY, OR WAREHOUSING
(Truck/bus/cab/ operator, people/postal/parcel/materials delivery, forklift/crane operator, other _____)
- 09 SAFETY
(Police, fire fighting, security guard, park ranger, other _____)

PRODUCTION

- 10 MANUFACTURING OR PRODUCTION
(Assembly line, milling, packaging, meat cutting, mining, refining, energy/power generation, other _____)
- 11 FARMING, LUMBERING, OR FISHING
(Plant or livestock farming, other _____)

CIVILIAN JOB TYPES LIST
(continued)

JOB AREA

JOB TYPE (AND SOME EXAMPLES)

MECHANICAL AND CONSTRUCTION

- 12 MECHANICAL REPAIR
(Auto/aircraft/ship engines or structures, other _____)
- 13 ELECTRICAL/ELECTRONIC REPAIR
(Television, radar, motors, circuitry, computers, other _____)
- 14 CONSTRUCTION OR UTILITIES CRAFTS
(Masonry, carpentry, plumbing, electrical, heating/air conditioning, paving, grading, painting, other _____)

MORALE

- 15 ART, ENTERTAINMENT, OR RECREATION
(Musician, artist, athlete, dancer, drama, other _____)

HEALTH

- 16 DOCTOR OR DENTIST
(other _____)
- 17 NURSE, PHARMACIST, OR MEDICAL/DENTAL TECHNICIAN/THERAPIST
(other _____)

EDUCATION, ENGINEERING, OR LEGAL

- 18 TEACHER, COUNSELOR, LAWYER, OR CPA
(other _____)
- 19 ENGINEERING OR RESEARCH
(Chemical, mechanical, mathematical, electrical, other _____)

Appendix D
Sampling Error and Confidence Intervals

Sampling Error and Confidence Intervals

For statistical calculations, given a question with two alternatives (yes/no, career/noncareer, problem/no problem, etc.), or one with several alternatives that are *aggregated* into two alternatives (for example, for Q21, Travel, $a + b = 74\%$, in C11 and C15), the proportion of the group answering one of the alternatives is notated as "p," and the proportion answering the other alternative, as "q." The sum of $p + q = 1.0$, so $q = 1 - p$ (in above example, $p = .74$ and $q = .26$).

This "p/q" model applies to Charts (C#) 15-16, 19-21, 27-29, and 39-40--in which alternatives in 5- or 7-point scales were aggregated into two alternatives. Thus, the "p/q" model does *not* apply to other charts that present descriptive/demographic results for categorical type scales, or "single most" results from forced choice type scales.

A "confidence interval" indicates the distance on each side (" \pm ") of a *sample* proportion within which the "true" *population* response/proportion is estimated to be. For example, if a sample proportion is $p = .30$ or 30%, and the confidence interval (in percentage points) is $\pm 5\%$, the population percentage is estimated to be within 25 to 35%.

The width of the confidence interval is determined by three factors: (1) Sample size--larger samples are more stable (i.e., narrower intervals), (2) disproportionate "p/q split"--splits near 50/50 are relatively more stable than those near 01/99 (see further discussion below), and (3) the "probability" (specified by the researcher) that the population value is near the sample value. For example, the interval within which there is a 95% probability (1.96 times "standard error"--notated here as st. err.) that the population value falls is narrower (smaller) than the interval for a 99% probability (2.58 times st. err.).

Procedures to calculate a confidence interval are: (1) Calculate standard error for a proportion, $\text{st. err.} = \sqrt{pq/n}$, (2) multiply st. err. by desired probability level (1.96 for 95% probability), then (3) apply that product to \pm the sample value.

Although the total usable Navy New Recruit Survey sample was $n = 4920$ (C5), only subgroups of particular interest to management were selected for analysis. Primary interest was in the regular Navy programs for men. The size of the subgroups range from 2060 (regular Navy men, C13) to 113 (2YO GENDET, C22). Table 1 presents confidence intervals for various p/q splits and sample sizes from 100-2,000.

Note in Table 1 that the intervals increase as sample size decreases. Note also that intervals *appear* to increase as p/q split centers towards 50/50. Actually however, the sample values are *relatively less* stable in the extreme splits. For example (in the smallest sample, $n = 100$), the $\pm 4.3\%$ interval for a 5% response is about 9/10th of that *response value* ($4.3/5 = .86$), compared with the $\pm 9.8\%$ interval for a 50% response--about 1/5th ($9.8/50 = .20$).

Generally, for samples at the 95% probability level, given sample responses from 05 or 95 to 50%, confidence intervals range from about ± 1 to 2 percentage points respectively for large samples (for example, $n = 2,000$), from 2 to 5% for subgroups of about $n = 400$, and from 4 to 10% for $n = 100$.

Table D-1**Confidence Intervals at 95% Probability Level for Various
Response Proportions and Sample Sizes**

Sample Size	Confidence Intervals (+/- %) for Sample Response p/q Percentages of			
	5/95%	10/90%	30/70%	50/50%
2000	1.0	1.3	2.0	2.2
1000	1.4	1.9	2.8	3.1
800	1.5	2.1	3.2	3.5
600	1.7	2.4	3.7	4.0
400	2.1	2.9	4.5	4.9
200	3.0	4.2	6.4	6.9
100	4.3	5.9	9.0	9.8

Note. For calculation of standard error of a proportion for above responses, (p) (q) products are: $(.05)(.95) = .0475$, $(.1)(.9) = .09$, $(.3)(.7) = .21$, $(.5)(.5) = .25$.

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